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ABSTRACT

GRADES OR AGES: K-6. SUBJECT MATTER: Mathematics. ORGANIZATION AND PHYSICAL APPEARANCE: Although the content is divided into seven skill levels, variations may be made in their use and two topics may be taught simultaneously. Each level is organized in two parts, the first having columns showing activities with examples, textual resources; and related resources, the second containing tests and answer keys. The guide is xeroxed and spiral-bound with a plastic binder. OBJECTIVES AND ACTIVITIES: No specific objectives are given for each level. INSTRUCTIONAL MATERIALS: References are provided throughout the guide to relevant Houghton Mifflin materials, with a column for the teacher to note other suitable material. STUDENT ASSESSMENT: Tests are provided for each level to measure the mastery of single skills or a number of related skills. The use of these tests is explained in the strategy manual at the beginning of the guide. (MBM)

ED048144

THE BREVARD COUNTY
MATHEMATICS CONTINUUM

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Brevard County Schools
Brevard County, Florida
June 30, 1970

SP007006

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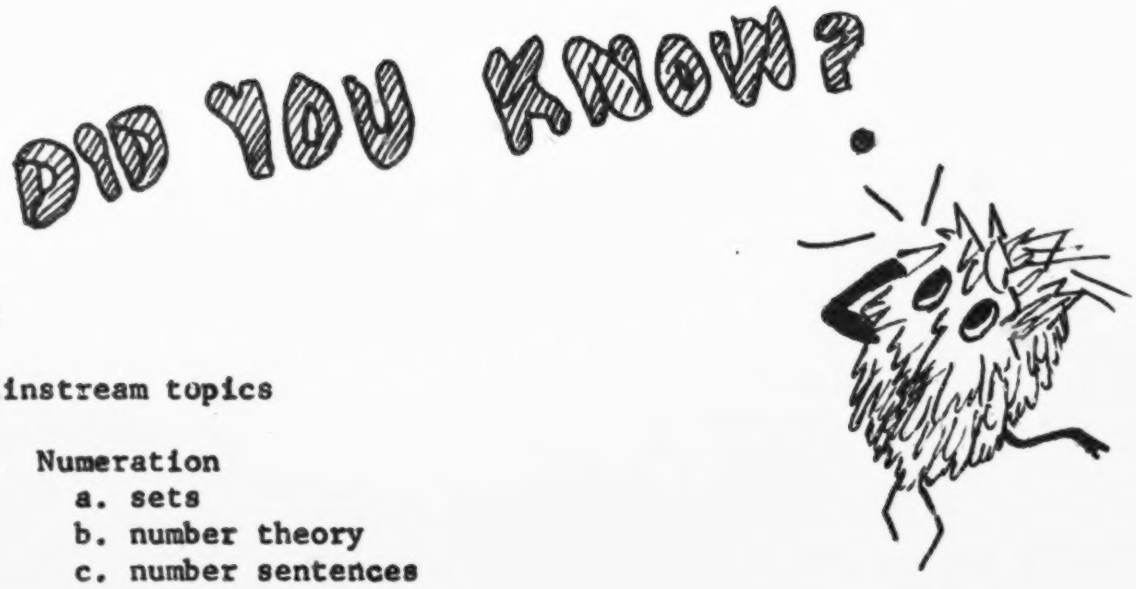
INTRODUCTION

The organization and development of the Mathematics Continuum is based on current research data concerning the individuality of the learner, the changing role of the teacher, and the necessity for the development of a more sequential approach to the teaching of mathematics in Brevard County Schools.

The Revised Mathematics Continuum is the result of a continuing effort to improve the instructional program. This effort has resulted in a program that provides the motivation for students, the organization for teachers, and the direction for parents in understanding their role of assisting their children in a time of social change and scientific progress.

During the past three years educators throughout the county have contributed their talents toward the development of the appropriate materials to assist classroom teachers in the implementation of the Mathematics Continuum. The large number of contributors prohibit the mentioning of their names, but the personal satisfaction of knowing that they were instrumental in developing a mathematical program that teaches students of all levels of ability the basic concepts, structure, and application of mathematics in daily life, is sufficient reward.

STRATEGY MANUAL


DID YOU KNOW?

I. TOPICS

- A. Mainstream topics
    1. Numeration
        a. sets
        b. number theory
        c. number sentences
        d. place value
    2. Addition and Subtraction
    3. Multiplication and Division
    4. Fractions
    5. Decimals
    6. Integers
- B. Floating topics
    1. Geometry
        a. non-metric
        b. metric (all geometry pertaining to measurement)
    2. Time
    3. Money
    4. Special Topics

II. SKILLS

- A. are listed in orde[illegible]fficulty within a topic
- B. cover fundamental [illegible]ts - they may be enlarged upon or added to as student needs arise

III. ACTIVITIES

- A. use teacher-made aids
- B. use commercial aids
- C. use additional test materials
- D. use educational games

IV. PUPIL PLACEMENT

- A. use teacher observation and judgment
- B. use previous year's pupil record card
- C. consider pupil achievement test scores

V. GROUPING

- A. group on the basis of student needs
- B. keep groups flexible
- C. use teacher aids
- D. use student aids

VI. MASTERY TESTS

- A. test individual skills
- B. test related skills
- C. use teacher-made tests
- D. destroy tests after use

VII. RECORD KEEPING

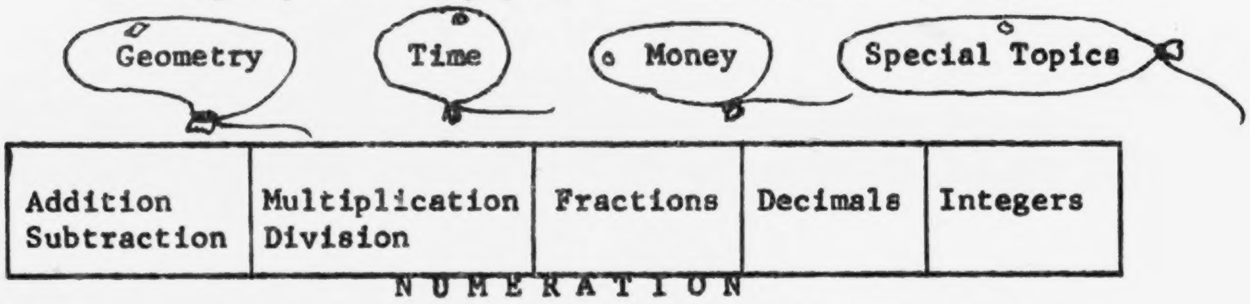
- A. record scores from prepared mastery tests on pupil record card
- B. maintain card as a vital part of each pupil's cumulative record

IT'S GOOD TO KNOW!

STRATEGY MANUAL

I. TOPICS

A. The sequencing of topics in the continuum was not intended to be a rigid guide nor to replace teacher creativity. One way variations may be made in the sequence is by using the floating topics at any point for motivation and interest.



B. Two topics may be taught simultaneously, ie., Numeration skills may be taught as they relate to other topics such as Addition and Subtraction, etc.

II. SKILLS

A. Skills, within a level, are listed in sequential order providing a more effective progression.

B. An entire topic, including all skills, the teacher pages in the related text, and accompanying mastery tests, should be carefully studied by the teacher prior to beginning actual instruction. Skills must be presented as related parts of a total concept if they are to be effectively used by the student. See Activities III A.

C. Some skills may be taught simultaneously. Numeration skills may be taught as they relate to skills being covered in addition and subtraction. This will give a student immediate opportunity to carry out and practice the behavioral skills he is learning.

D. Many of the pages in the Houghton Mifflin series contain a mixture of practice exercises covering several skills and/or more than one topic. These pages usually have been keyed to the most difficult skill on the page and are usually keyed to Mixed Practice. Teachers should check to be certain, before assigning a page, that the student knows the skills involved or assign only that part of the page which is suitable.

E. Skills listed under In-Depth at each level in the continuum provide activities for students who are ready to extend their abilities. Mastery tests for most of these skills are not provided. Much of this material appears at another level where mastery is expected.

III. ACTIVITIES

A. When a new topic is introduced at each level, it is recommended that it be developed through the use of concrete materials, moving toward the abstract.

B. Houghton Mifflin duplicating masters and overhead visuals have been keyed, as they apply, under the heading Related Resources. Since no one listing of other commercial aids would be suitable for all students or available in all classrooms, space has been provided for each teacher to key in commercial aids and/or teacher-made aids available to them in their individual schools.

C. The text pages keyed to each skill merely indicate the pages available in Houghton Mifflin. These pages should be considered as base materials only. The Houghton Mifflin series presents The Assignment Guide as an aid to help the teacher plan in minimum, average or maximum course of study. Since pupil's needs vary, some pupils will use only a portion of this material while others will need additional material from other sources. Addison-Wesley texts are still available for supplementary activities.

D. The use of instructional games should be an integral part of the teaching strategy, particularly for the reluctant learner.

IV. PUPIL PLACEMENT

A. Initial placement of a pupil on the continuum should be made after the teacher or teaching team has made a careful study of the pupil's record card from the previous year, coupled with observation of pupil performance during a period of review. An assessment of the pupil's knowledge of numeration skills, and the basic operations should indicate the level at which the student can be assigned.

B. As achievement test scores are examined it should be noted that a grade score indicates the point at which the student can no longer function independently rather than the instructional level.

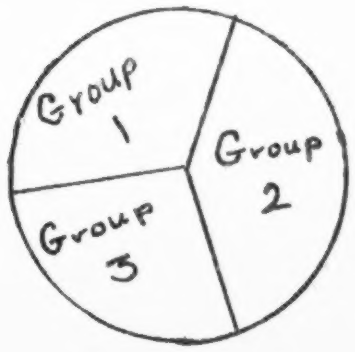
C. Transfer students entering school at any time during the year, can be placed according to recommendations of previous teacher.

D. Pupils entering school who have had no prior experience in this program can be placed by teacher observation or by teacher-made tests.

V. GROUPING

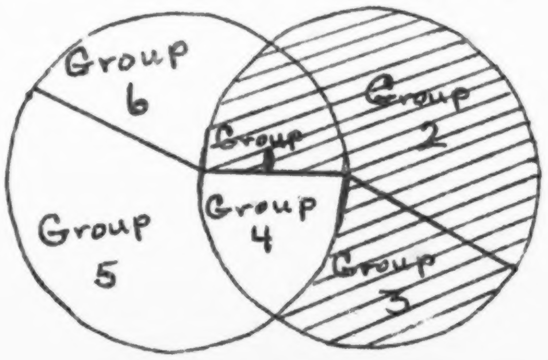
A. Whether pupils are assigned heterogeneously or homogeneously, small grouping for individualized instruction within the classroom is essential for maximum student achievement.

Teacher A



Homogeneous

Teacher B Teacher C



Heterogeneous

Possibilities for grouping patterns are endless. They must be formulated on the basis of student needs as they relate to individual school facilities and organization. Whatever the design for implementation, groups must be kept flexible to enable each student to start the learning sequence at the point which is most appropriate for him and can make steady progress in the mastery of the defined objectives.

B. If a given set of pupils are working at the same level of the continuum and on the same topic, provision should be made through grouping for varying rates of learning, need for individual help and readiness for in-depth activities.

A possible grouping pattern.

Level F	Multiplication and Division		
Wed.	Total Group 15 minute presentation Napier's Rods	Group 1 & 2 2-20 minute individual mixed practice	Group 3 45 minutes help students construct individual sets of Napier's Rods
Thurs.	Group 1 & 2 15 minute presentation review multiplication with regrouping	Group 1 give individual assistance in practice work. Multiplication with regrouping Group 2 independent work from board multiplication with regrouping	Group 3 complete construction of Napier's Rods Use rods to work problems. p._____
Fri.	TOTAL GROUP Educational Games		

C. If a given set of students is working on two or more levels of the continuum, it may be advantageous to keep them working on the same topic, thus allowing for some total group presentations.

D. At times, student communication is more effective than teacher - student communication. Allow students to work in pairs if this seems mutually profitable.

E. Older students can sometimes be paired with younger pupils to guide individual activities.

F. Most students should work through all topics at a given level before moving on to the next level.

G. Extremely capable students who express a very strong interest in a specific topic may, at the teacher's discretion, occasionally extend their study to skills beyond those listed at their prescribed level.

H. Older students who appear to be reluctant learners may not engage in the study of all topics. Major emphasis should be placed on numeration skills, addition and subtraction, simple fractions, money and time. Emphasize those skills which will be most necessary for them in everyday living. This type of student may need to work across several levels of the continuum to develop a topic.

I. If students become frustrated with the study of a given topic or skill, move on to a different topic for a time.

J. Emphasis should always be placed on understanding rather than on the number of topics completed.

VI. MASTERY TESTS

A. Copies of prepared mastery tests (A - G) are provided in the continuum. These can be duplicated or presented on the chalkboard or overhead projector. Some of these tests measure mastery of a single skill and others measure mastery of a number of related skills.

B. It is not always desirable to use a mastery test immediately after the completion of the study. Some skills will require year long application before testing. The prepared mastery test or one comparable to it, can be given to determine if the student has maintained proficiency.

C. Oral tests, administered individually to young pupils, could be given by an older student.

D. Results of the mastery tests should be discussed with the pupil involved and/or with the parents at conference time. DO NOT SEND MASTERY TESTS HOME. All use of these tests should be made at school. Tests should then be destroyed.

VII. RECORD KEEPING

A. Mastery test results are to be recorded on the student record card. Indicate percent scored with a check mark. Use the color which indicates the pupil's year in school.

B. Mastery is indicated by a score of 70-100%. If a child scores less than this the first time the test is given, record that score in the appropriate box. After reteaching, test again, record again, etc. until mastery is attained. Teacher judgment should determine when to retest after reteaching to reduce the chance of having several check marks in the same box.

C. As pupils move from school to school or within a school, the record should be transferred with all other records in his cumulative folder.

D. An asterisk on the continuum indicates a teacher tested skill. The slashed marked area on the student record card indicates these teacher tested skills.

CONVERSION TABLES OF APPROXIMATE MEASURES

APPROXIMATELY EQUIVALENT LINEAR UNITS	
Metric Unit	English Unit
1 mm.	0.04 in.
1 cm.	0.39 in.
1 m.	39.37 in.
1 km.	0.62 mi.
2.54 cm.(exact)	1 in.
0.30 m.	1 ft.
0.91	1 yd.
1.61	1 mi.

APPROXIMATELY EQUIVALENT UNITS OF AREA	
Metric Unit	English Unit
1 sq.mm.	0.002 sq.in.
1 sq.cm.	0.16 sq.in.
1 sq. m.	10.76 sq.ft.
1 sq.km.	0.39 sq.mi.
6.45 sq.cm.	1 sq.in.
0.09 sq.m.	1 sq.ft.
0.84 sq.m.	1 sq.yd.
2.59 sq.km.	1 sq.mi.

APPROXIMATELY EQUIVALENT UNITS OF CAPACITY	
Metric Unit	English Unit
1 liter	2.1134 pt.
1 liter	1.0567 qt.
1 liter	0.2642 gal.
3.785 liters	1 gal.

MATHEMATICS CONTINUUM

LEVEL A

Kindergarten Manual

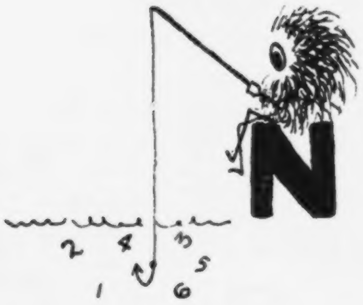
The Houghton Mifflin Kindergarten program is organized in two parts. Part I is to be taught informally. Part II is taught through the use of the Kindergarten Workbook. Each of the four sections in Part I is related to Part II. These parts may be taught independently or in conjuction with each other. Part I and Part II are keyed to Level A of the Continuum to show their relationship to the skills presented there.

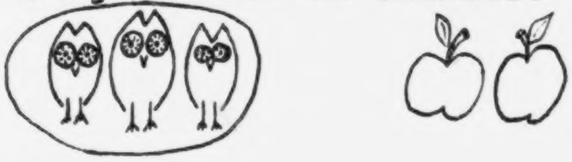
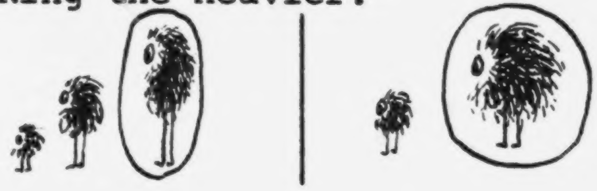
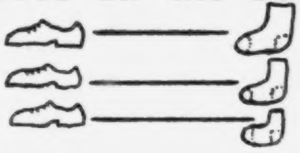
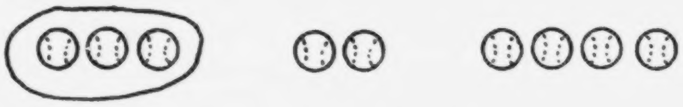
Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and Continuum mastery tests should be used to provide sufficient evidence to check the 70-100% (mastery level) for each skill.

Non-Metric Geometry should be taught before Fractions so that children will become familiar with the term "region" before being asked to identify fractional parts of a region.

LEVEL A

NUMERATION



		Example Numeration
1.	Classifies any collection of objects by orally listing the elements in the set or by identifying a property common to all members of the set.	"Ring the set of animals." 
2.	Identifies the correct object or objects according to some common property such as: largest, smallest, longest, shortest, inside, outside, heavier, oldest, alike, different . . .	"Ring the tallest." "Ring the heavier." 
3.	Matches the elements in a one-to-one correspondence when given two equivalent or non-equivalent sets of objects, up to ten.	"Draw lines to match the objects in the sets." 
4.	Makes intuitive numerical comparisons without the use of one-to-one matching when given nonequivalent sets.	"Mark the set with the most objects." "Mark the set with the fewest objects."
5.	Identifies (orally or by marking) the cardinal number of a structured group to ten. Selects a set, or constructs a set, which contains as many objects as a given number, including zero.	"Mark each set of three." 
*6.	Counts orally from one to ten.	"Say the numbers from one to ten."
*7.	Reads numerals (one to ten) orally from left to right.	"Read these numbers." 1 2 3 4 5 6 7 8 9 10

Textual Resources	Related Resources	Notes
Numeration		
1. HM Book K Part I, T.E. Section I Activity 1 Section II Activities 1-15 HM Book K Part II, pp. 30-32	Instructo Primary Felt Cut-Outs and Magnetic Primary Counting Shapes	
2. HM Book K Part I, T.E. Section I Activities 2-8 Section II Activities 17, 26-30 HM Book K Part II, pp. 1-10	See Numeration 1	
3. HM Book K Part I, T.E. Section II Activities 18, 22-25, 31 HM Book K Part II, pp. 33-39	See Numeration 1	
4. HM Book K Part II, pp. 40-44	See Numeration 1	
5. HM Book K Part I, T.E. Section II Activities 16, 19-21 Section III Activities 1-9, 12, 13, 18 HM Book K Part II, pp. 45-57, 59, 69-79, 84	See Numeration 1 Instructo Felt Numerals and Magnetic Numerals	
6. HM Book K Part I, T.E. Section III Activities 10, 11, 15, 16 HM Book K Part II, pp. 49, 52, 70, 74, 77	Milton-Bradley Cubical Counting Blocks Beads on Shoestring	
7.	See Numeration 5 Instructo Walk-On Number Line 0-10	

LEVEL A

Numeration

8. Responds to questions related to the number sequence one to ten, e.g., tells what number comes before or after a given number, or in-between two numbers.

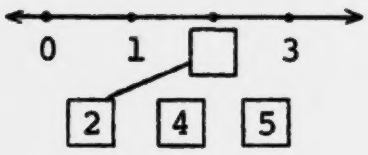
9. Mixed Practice.

10. In-Depth.

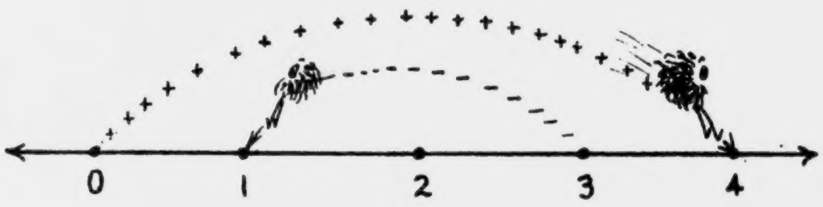
Example

Numeration

"Draw a line to the numeral that belongs in the ☐ ."



ADDITION AND SUBTRACTION



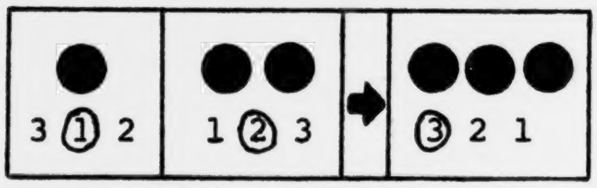
1. Circles the correct numeral for pictured addition statements, with sums to six.

2. Circles the correct numeral for pictured subtraction statements as an inverse of addition facts learned in skill 1.

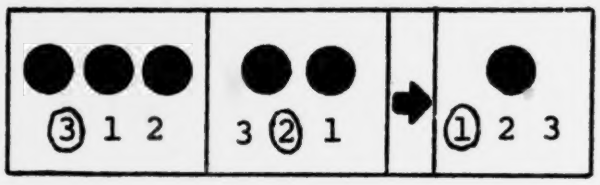
3. In-Depth.

Addition and Subtraction

"Ring the correct numerals."



"Ring the correct numerals."



Textual Resources	Related Resources	Notes
Numeration		
8. HM Book K Part I, T.E. Section III Activities 14, 24, 25, 26 HM Book K Part II, pp. 60-67, 80, 81, 83	See Numeration 7 Instructo or Universal Stepping Stones numerals 1-10 Ideal Number Line	
9. HM Book K Part II, p. 82		
10. HM Book K Part II, p. 58		
Addition and Subtraction		
1. HM Book K Part I, T.E. Section II Activities 32-36 Section III Activities 20, 23 HM Book K Part II, pp. 85-91	Weber Costello Visual Number Readiness Cards 0-10 Houghton Mifflin Notation Cards	
2. HM Book K Part II, pp. 92-96	See Add. and Sub. 1	
3. HM Book K Part I, T.E. Section III Activities 21, 22		

LEVEL A

FRACTIONS

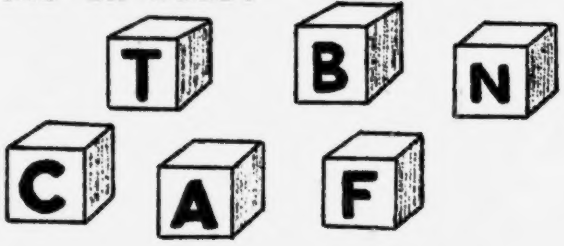
*1. Divides a real object, picture of a real object, a set of real objects, or a set of pictures of real objects in "half" and identifies "one-half" of an object or set of objects. Limit 6.

*2. Uses or responds correctly to the terms "whole" and "one-half" in reference to real objects, pictures of real objects, or sets of pictures of real objects. Limit 6.

Example

Fractions

"Separate this set of six blocks in half."



"Show me half of a circle." "Find the half that matches it and show me the whole circle."

NON-METRIC GEOMETRY

*1. Identifies a specific point.

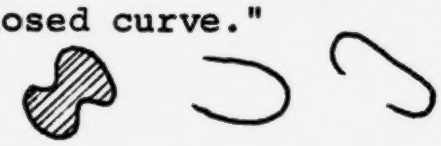
*2. Identifies a line as straight or curved.

*3. Identifies a simple closed curve.

4. Identifies the inside or outside of simple closed curves.

Non-Metric Geometry

"Color the inside of the closed curve."



Textual Resources	Related Resources	Notes
Fractions		
1. HM Book K Part II, See teacher activities T.E. pp. 94, 96	Instructo Discovering Fractions	
2. HM Book K Part II, See teacher activities T.E. pp. 94, 96	See Fractions 1	
Non-Metric Geometry		
1. HM Book K Part I, T.E. Section I Activities 9, 10		
2. HM Book K Part I, T.E. Section I Activities 11, 13		
3. HM Book K Part I, T.E. Section I Activities 17, 18		
4. HM Book K Part I, T.E. Section I Activities 19, 21, 22 HM Book K Part II, pp. 11-13		

LEVEL A

Non-Metric Geometry

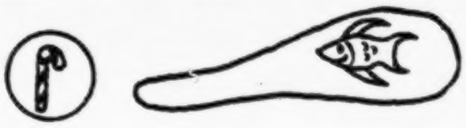
*5. Identifies the following figures on request: circle, triangle, rectangle, square. Responds to these words when used in directions.

6. In-Depth.

Example

Non-Metric Geometry

"Color the objects that are inside circles."



METRIC GEOMETRY

*1. Uses some specific unit for comparison in measurement.

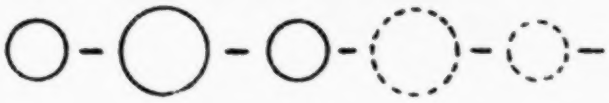
Metric Geometry

SPECIAL TOPICS

1. Identifies or continues patterns using geometric shapes.
Teacher note: (Pattern recognition leads to development of logical thinking and prepares the child for finding patterns in numbers.)

Special Topics

"Complete the patterns."



Textual Resources	Related Resources	Notes
Non-Metric Geometry		
5. HM Book K Part I, T.E. Section I Activities 20, 26, 30, 33 HM Book K Part II, pp. 14-23	Instructo Geometric Shapes	
6. HM Book K Part I, T.E. Section I Activities 12, 14-16, 23-25, 27, 28, 31, 32 HM Book K Part II, p. 28, 29, 68		
Metric Geometry		
1. HM Book K Part I, T.E. Section IV Activities 1-16	Ideal Liquid Measures	
Special Topics		
1. HM Book K Part II, pp. 24-27	Instructo Primary Felt Cut-Outs and Magnetic Primary Counting Shapes	

LEVEL A

TESTS

and

ANSWER KEYS

LEVEL A

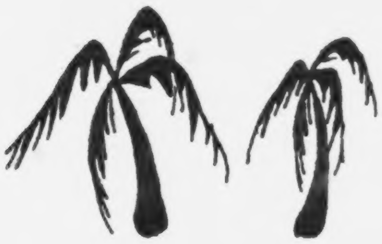
NUMERATION

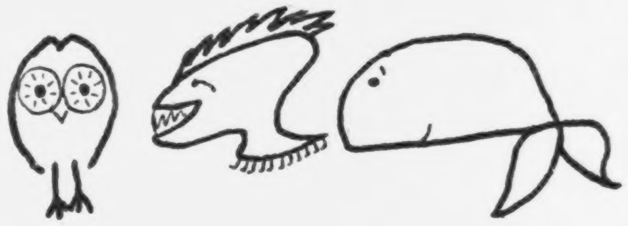
Skill 1, 2, (Page 1 of 2 pages)

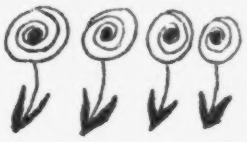
Name________________________

Date________________________

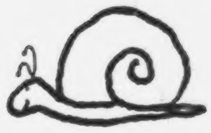
Ring the set of animals.

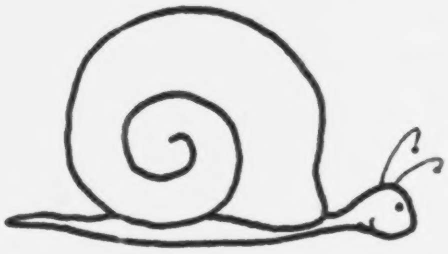


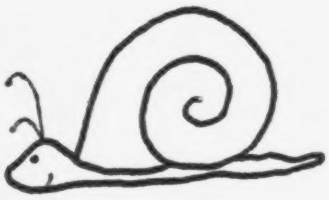




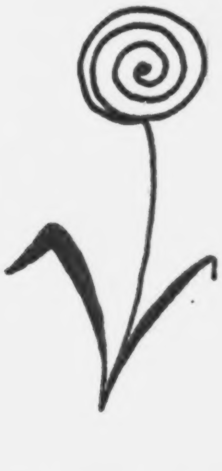
Ring the largest.

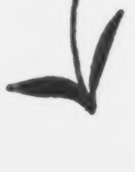


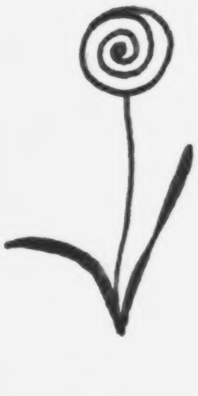




Ring the tallest.







LEVEL A

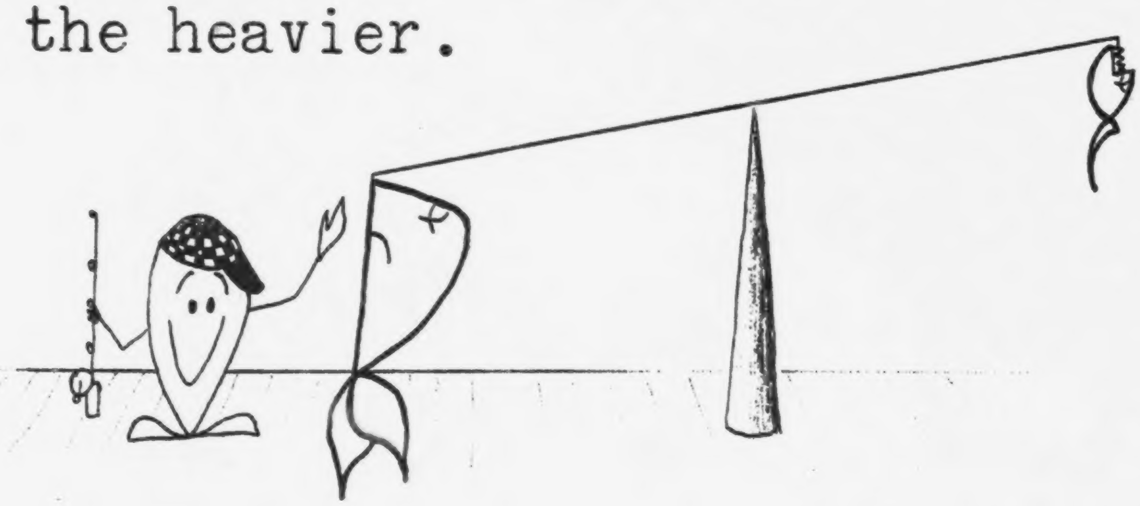
NUMERATION

Skill 1, 2 (Page 2 of 2 pages)

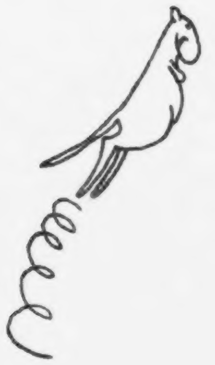
Name____________________

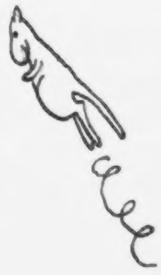
Date____________________

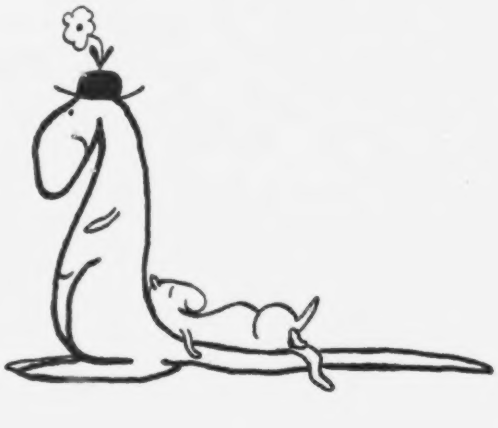
Ring the heavier.



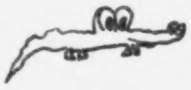
Ring the oldest.

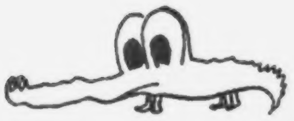


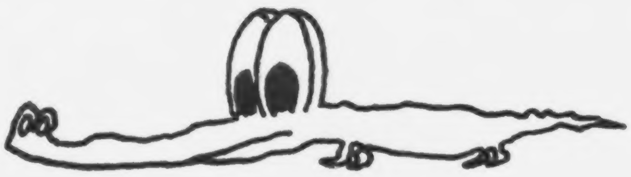


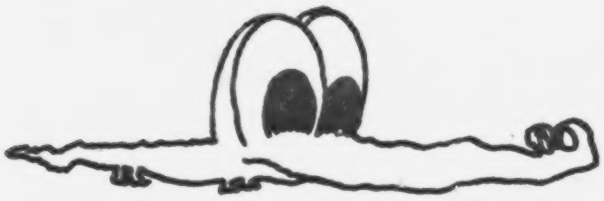


Ring the two that are the same size.









LEVEL A

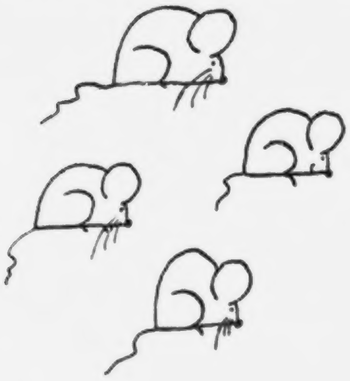
NUMERATION

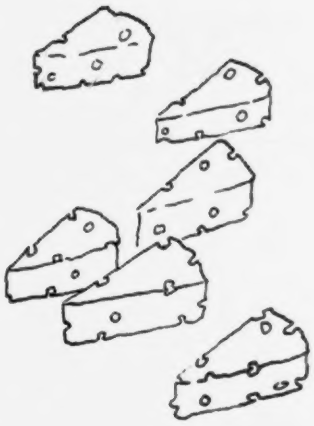
Skill 3, 4

Name____________________________

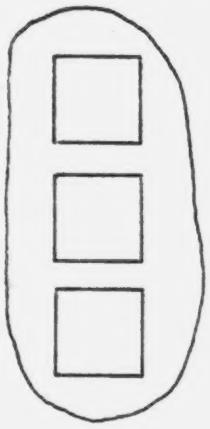
Date____________________________

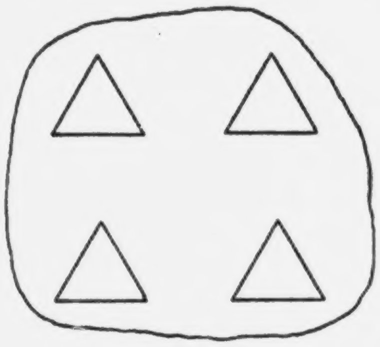
Match the objects in the sets.
Mark the set which has more.

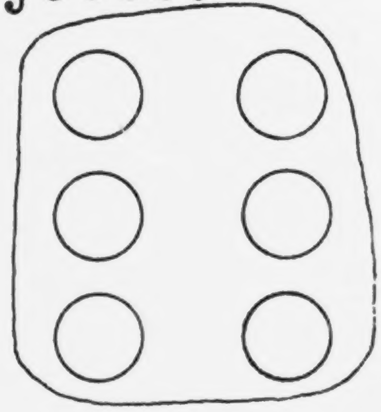




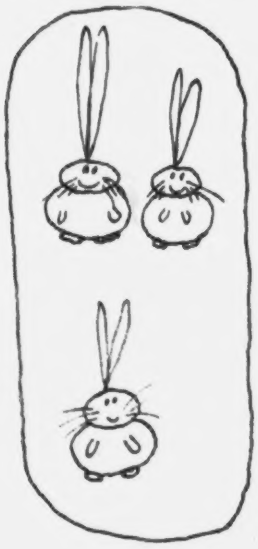
Mark the set with the most objects.

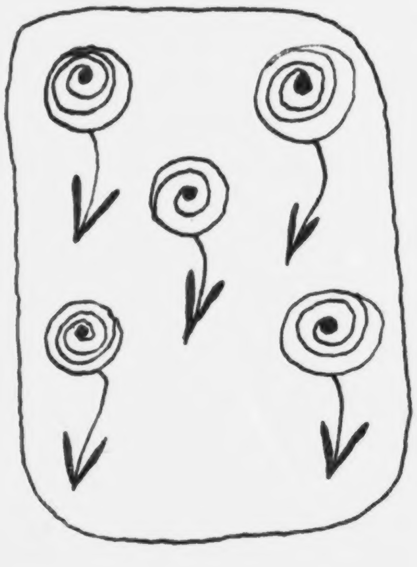


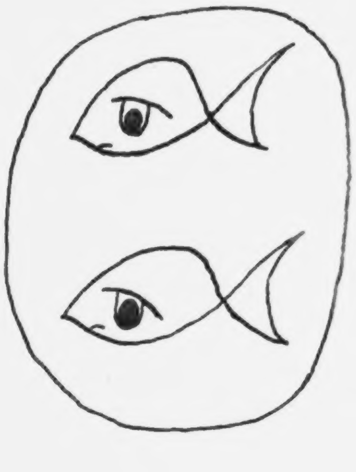




Mark the set with the fewest objects.







LEVEL A

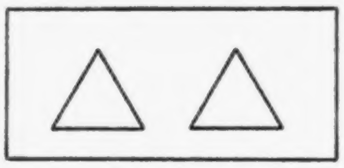
NUMERATION

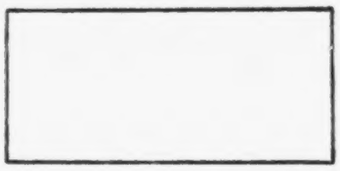
Skill 5, 8

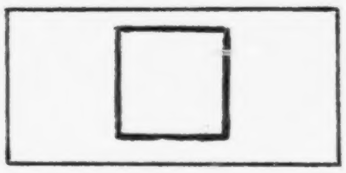
Name________________________

Date________________________

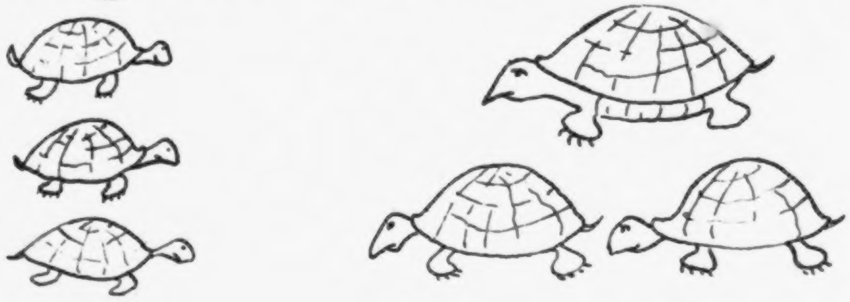
Mark the set of zero.



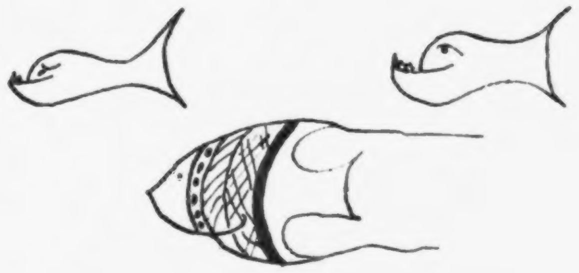




Ring the numeral for the number of the set.

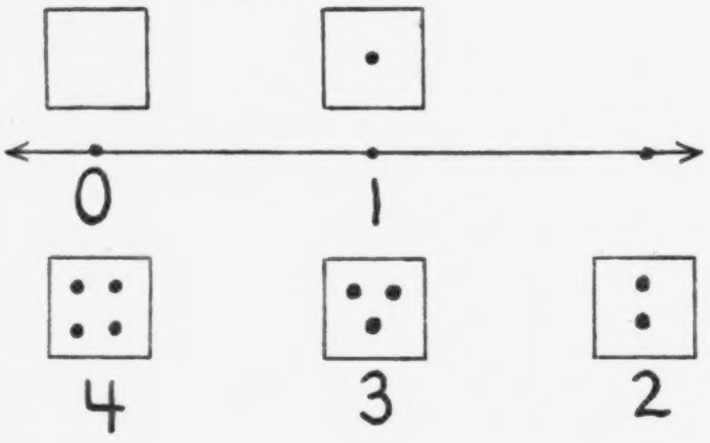


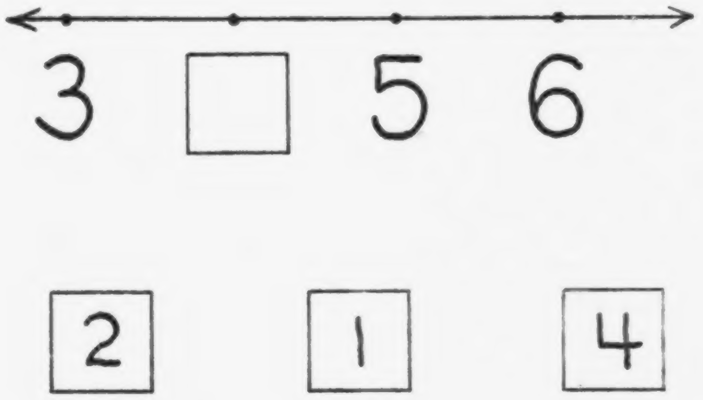
6 4 5



3 5 2

Draw a line to the block that belongs in the space.





LEVEL A

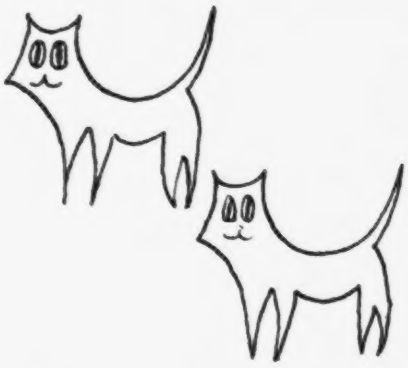
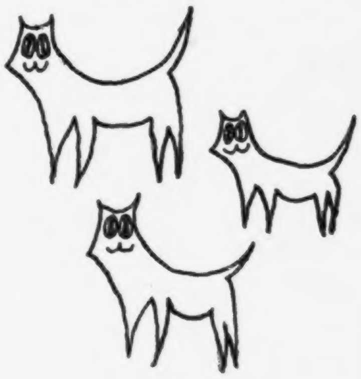
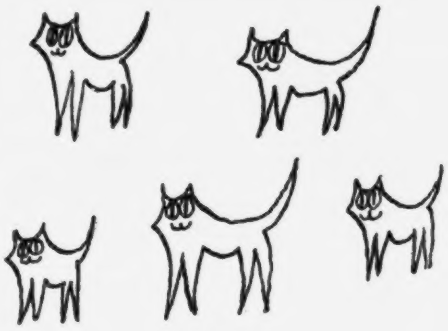
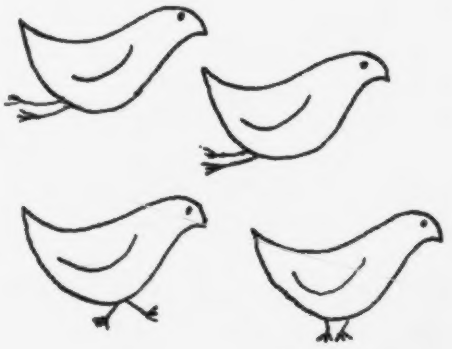
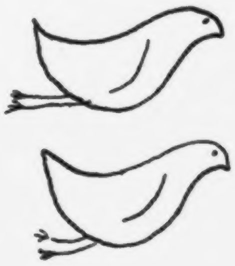
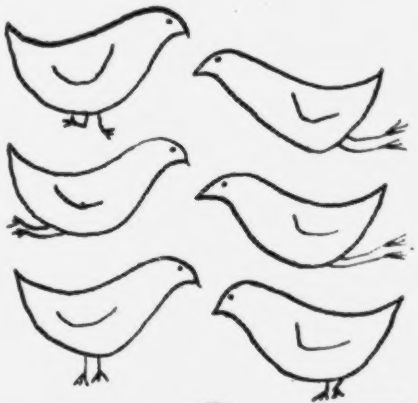
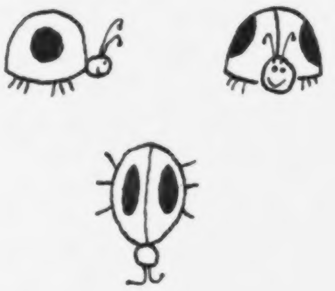
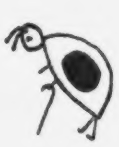
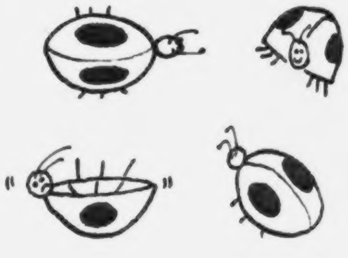
ADDITION AND SUBTRACTION

Skill 1

Name ____________________

Date ____________________

Ring the correct numerals.

 3 2 1	 3 1 4	→	 4 3 5
 2 3 4	 2 3 4	→	 4 6 5
 3 2 4	 2 1 3	→	 3 4 5

LEVEL A

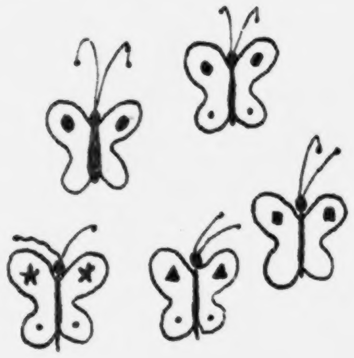
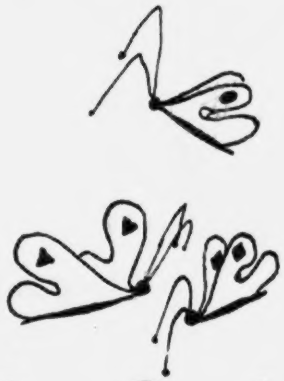
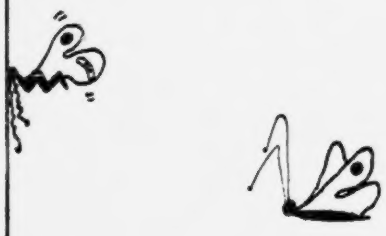
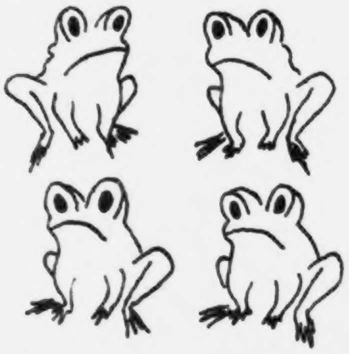
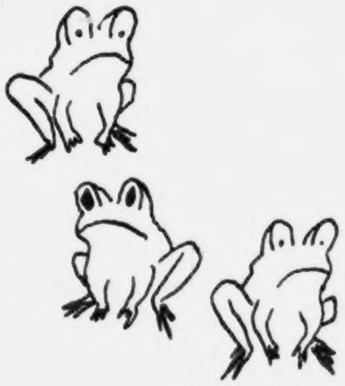
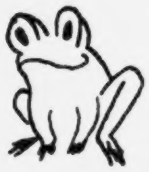
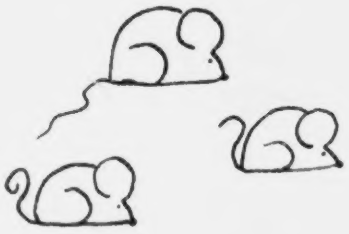
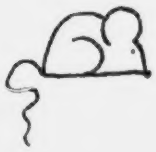
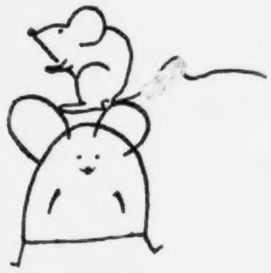
ADDITION AND SUBTRACTION

Skill 2

Name

Date

Ring the correct numerals.

 4 5 3	 3 2 4	→	 2 3 1
 3 4 5	 4 3 2	→	 1 3 2
 4 3 2	 2 3 1	→	 2 3 1

LEVEL A

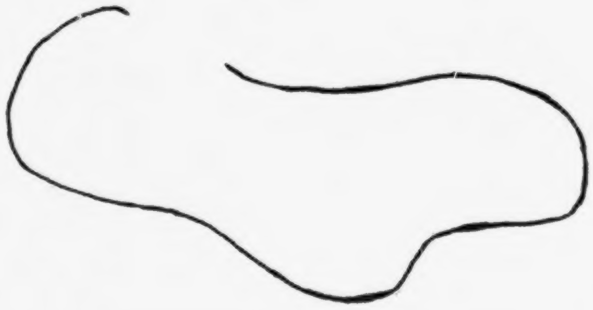
Name ______________________________

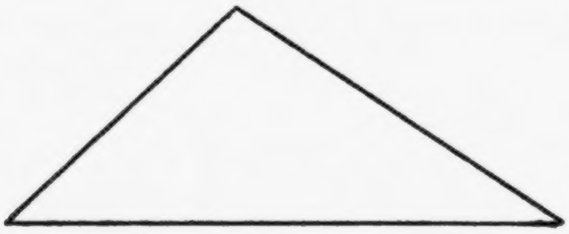
NON-METRIC GEOMETRY

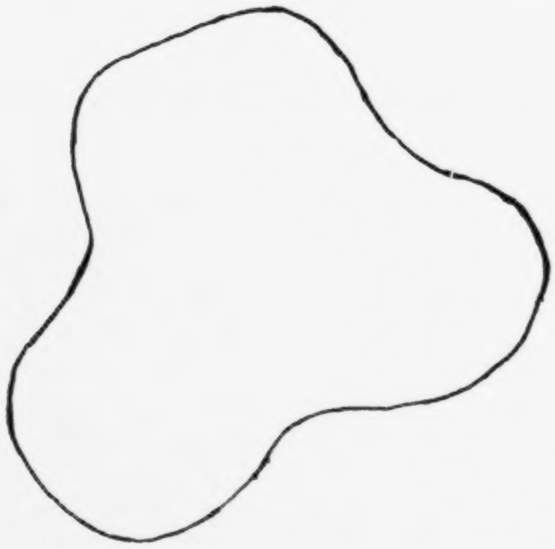
Date ______________________________

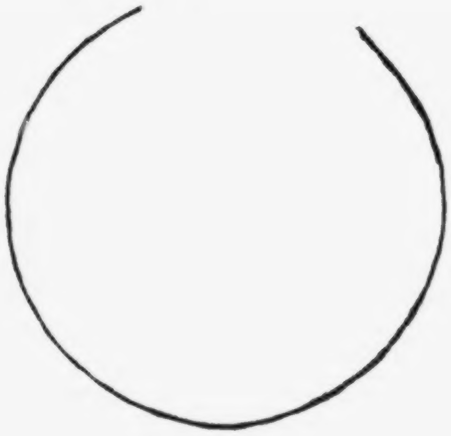
Skill 4

Color the inside of the closed curves.









LEVEL A

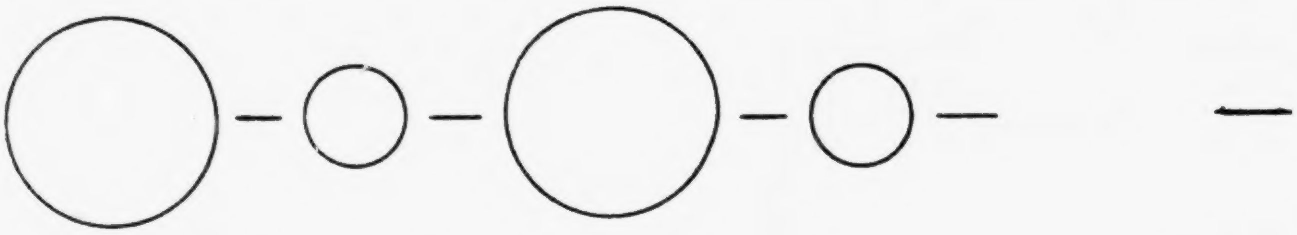
SPECIAL TOPICS

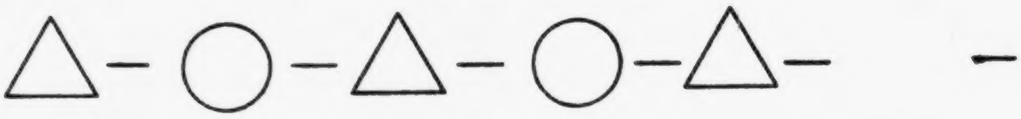
Skill 1

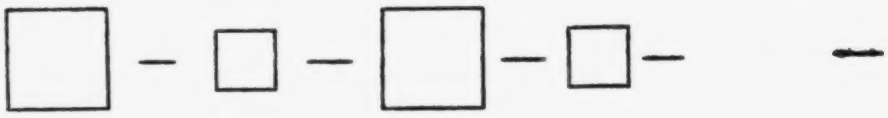
Name ______________________

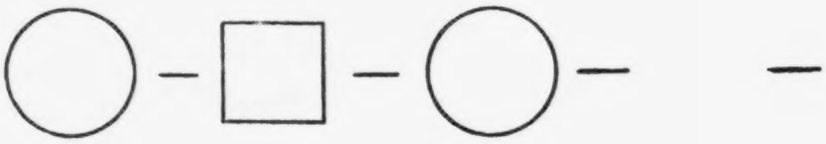
Date ______________________

Complete the pattern.









LEVEL A

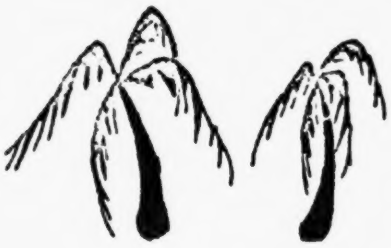
NUMERATION

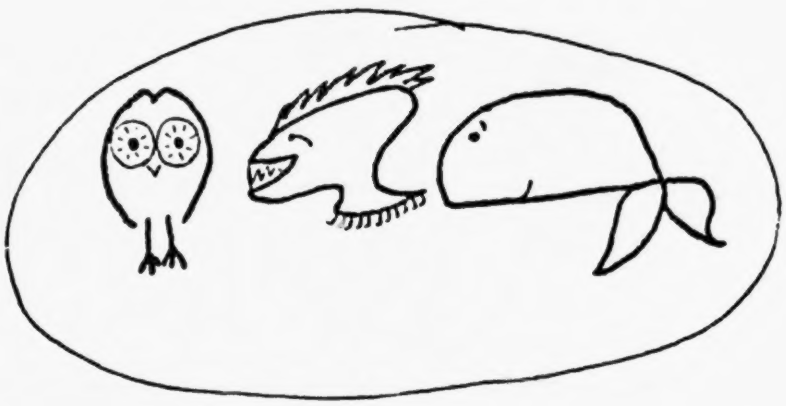
Skill 1, 2, (Page 1 of 2 pages)

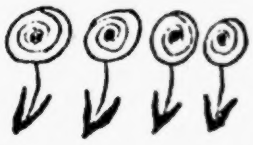
Name ____________________

Date ____________________

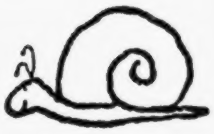
Ring the set of animals.

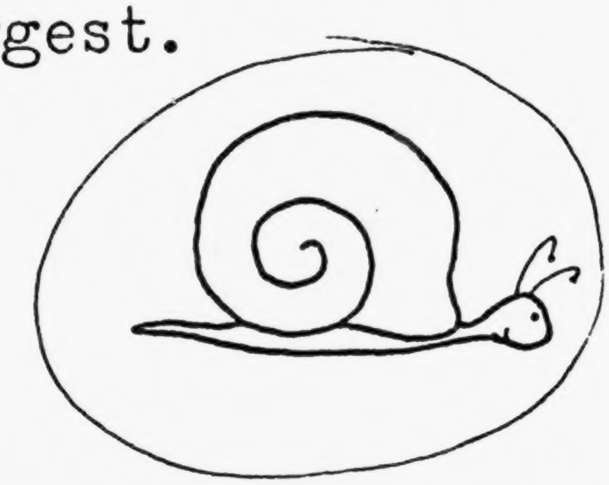


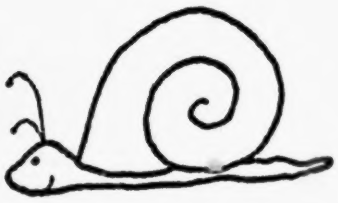




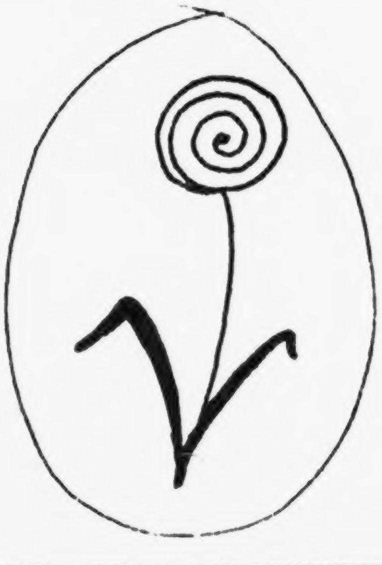
Ring the largest.

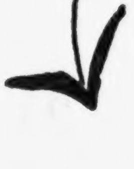


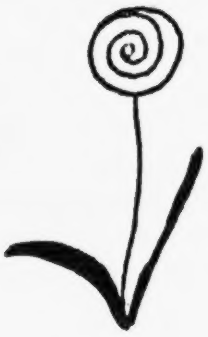




Ring the tallest.







LEVEL A

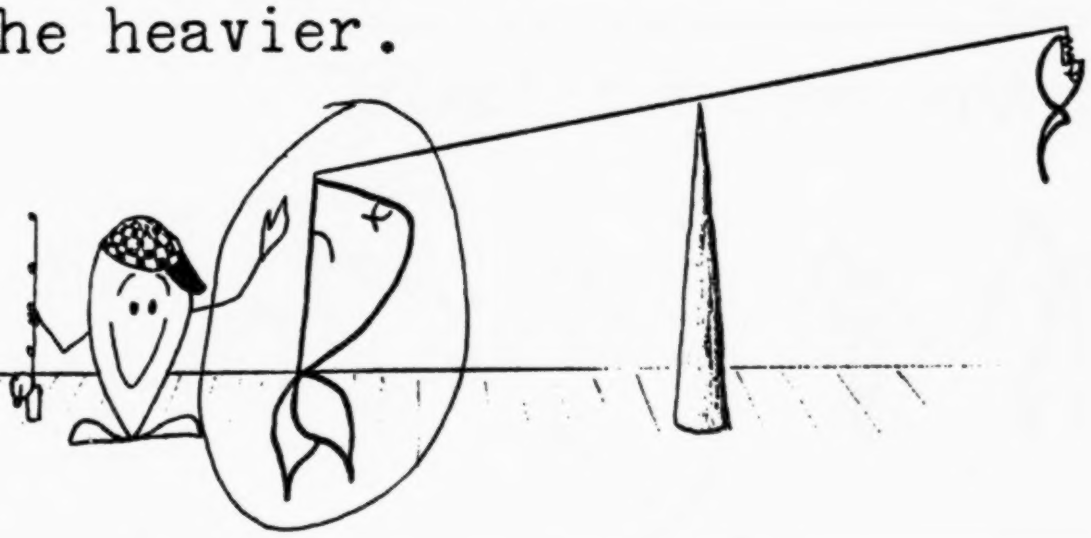
NUMERATION

Skill 1, 2 (Page 2 of 2 pages)

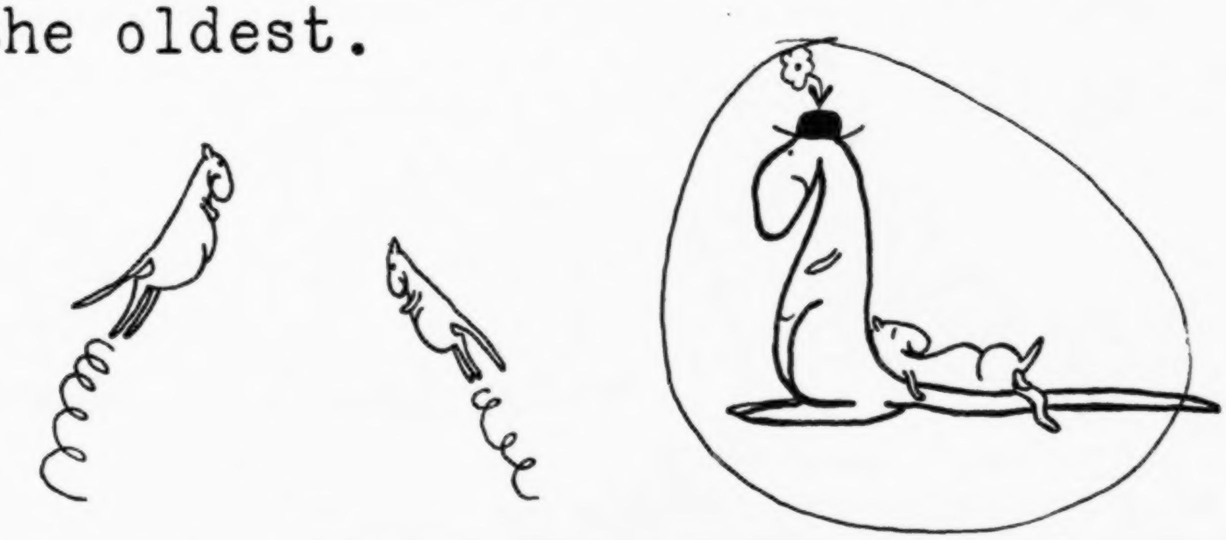
Name________________________

Date________________________

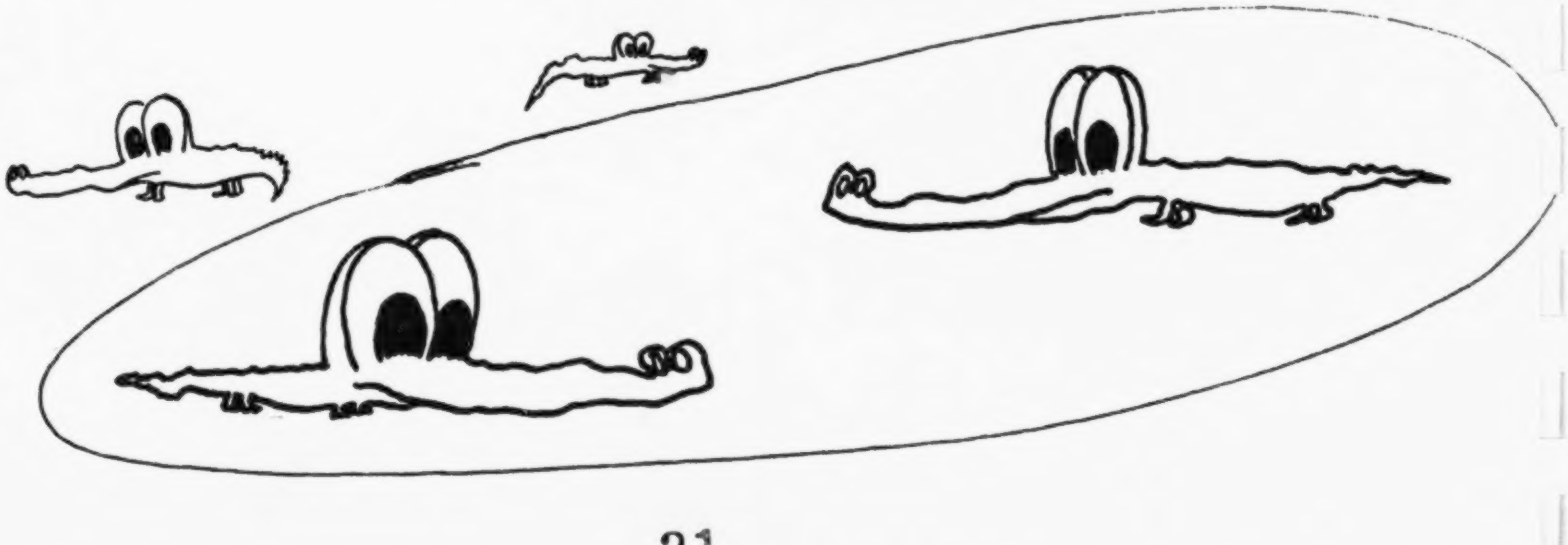
Ring the heavier.



Ring the oldest.



Ring the two that are the same size.



LEVEL A

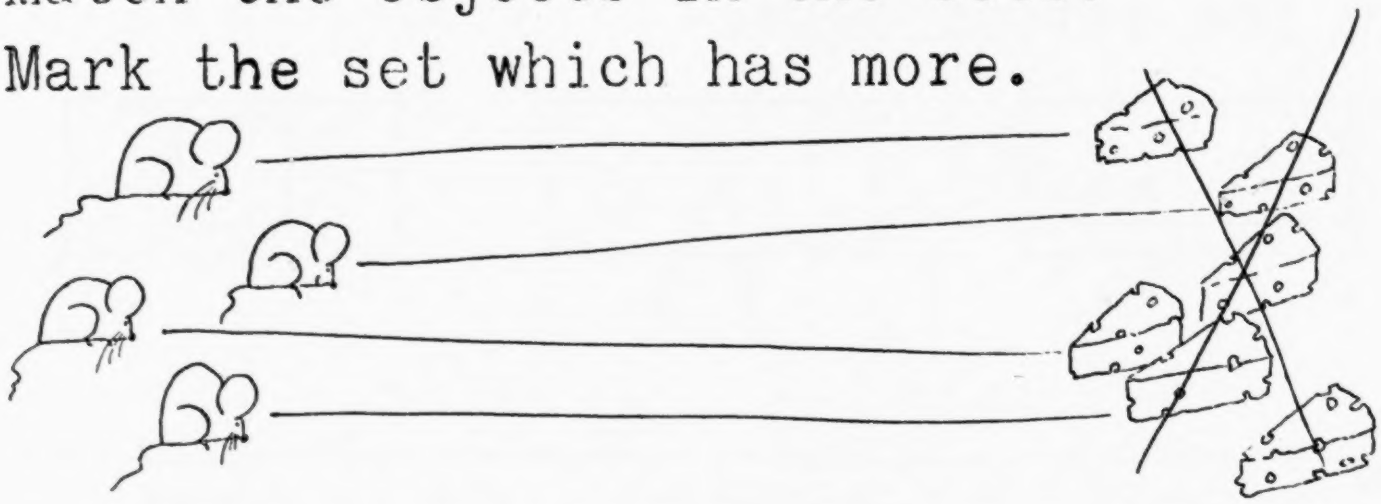
NUMERATION

Skill 3, 4

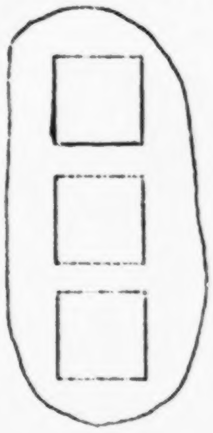
Name______________________________

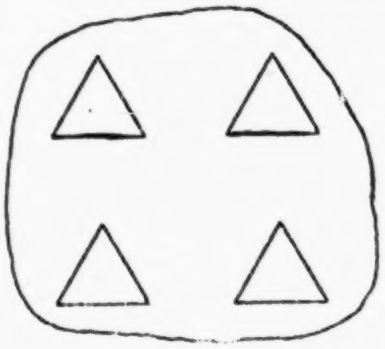
Date______________________________

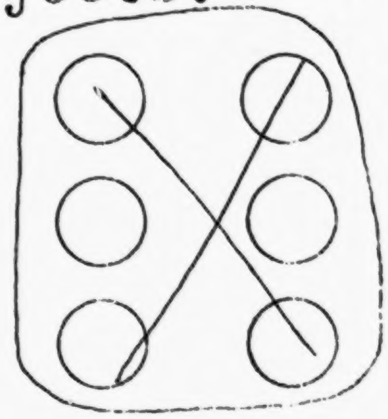
Match the objects in the sets.
Mark the set which has more.



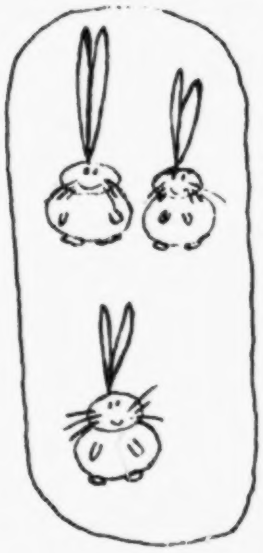
Mark the set with the most objects.

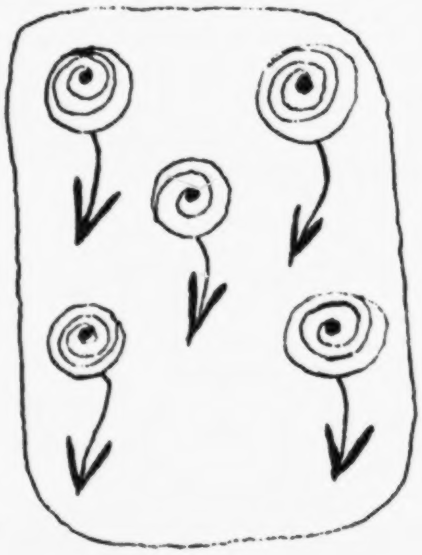


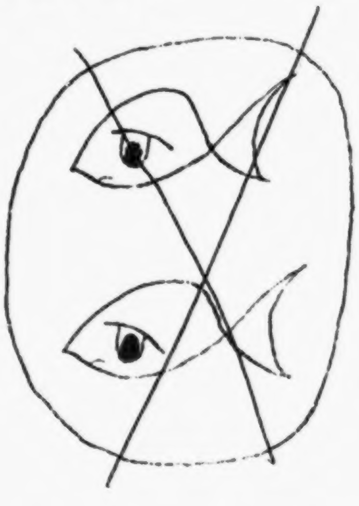




Mark the set with the fewest objects.







LEVEL A

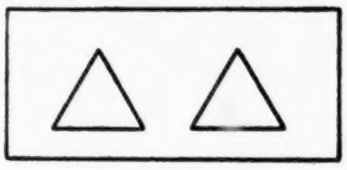
NUMERATION

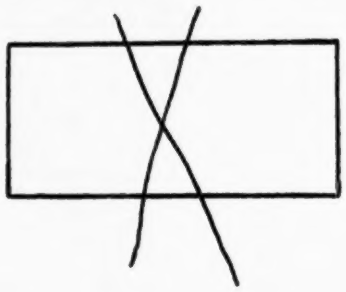
Skill 5, 8

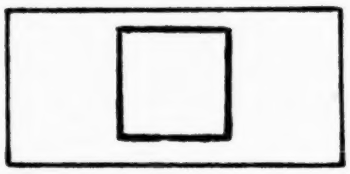
Name____________________

Date____________________

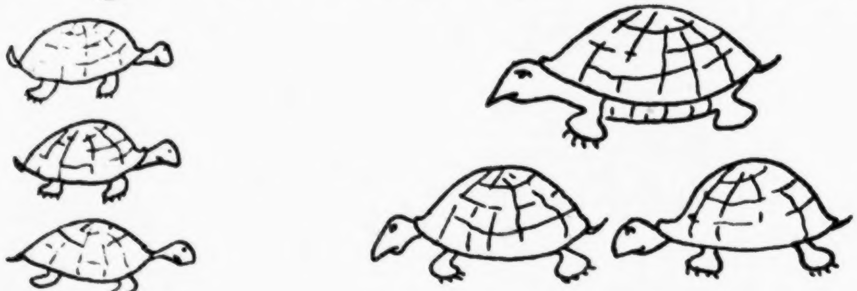
Mark the set of zero.



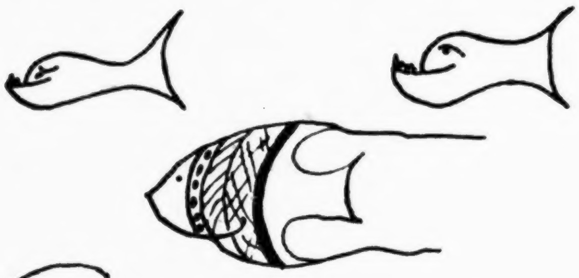




Ring the numeral for the number of the set.

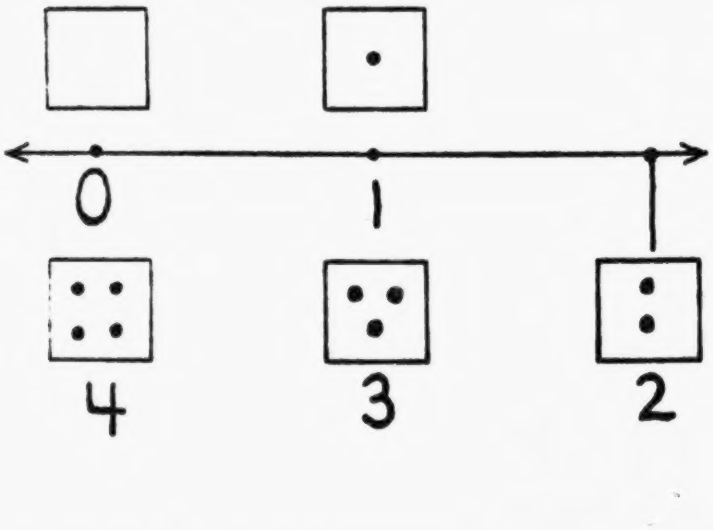


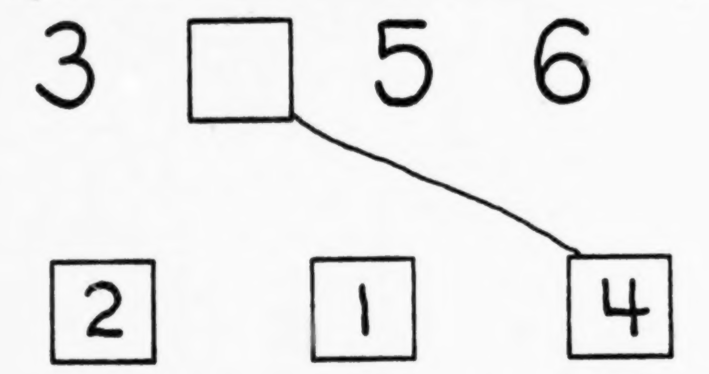
[✓ 6] 4 5



[✓ 3] 5 2

Draw a line to the block that belongs in the space.





LEVEL A

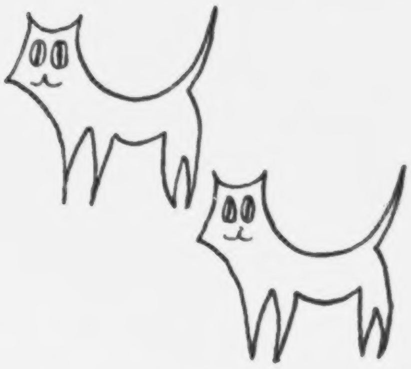
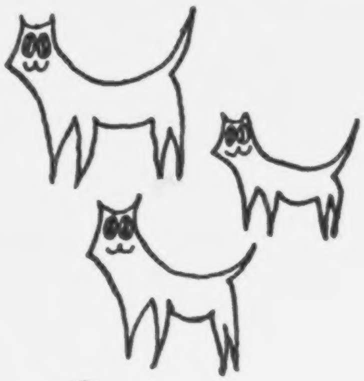
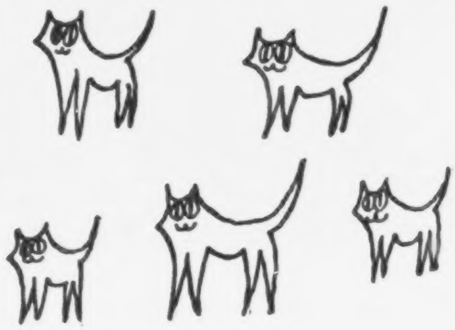
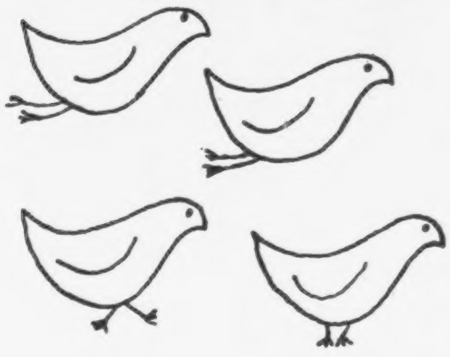
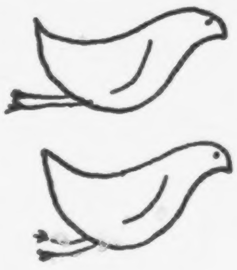
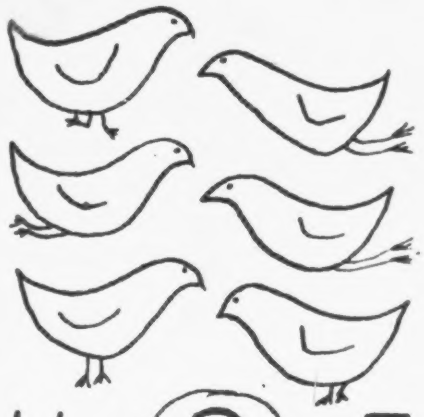
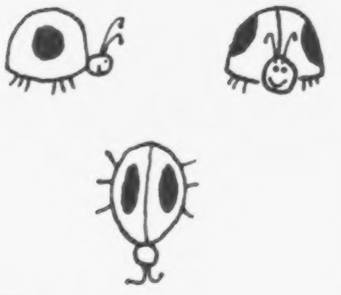
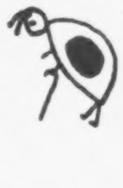
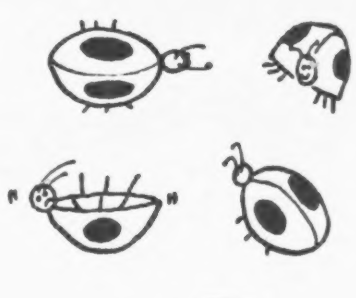
ADDITION AND SUBTRACTION

Skill 1

Name

Date

Ring the correct numerals.

 3 [✓ 2] 1	 [✓ 3] 1 4	→	 4 3 [✓ 5]
 2 3 [✓ 4]	 [✓ 2] 3 4	→	 4 [✓ 6] 5
 [✓ 3] 2 4	 2 [✓ 1] 3	→	 3 [✓ 4] 5

LEVEL A

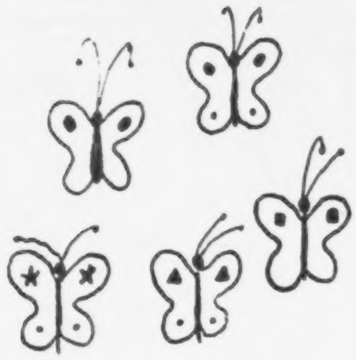
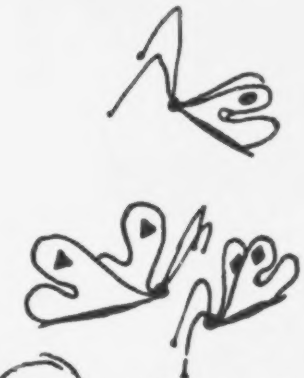
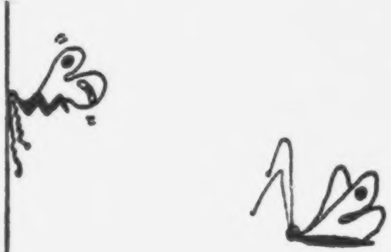
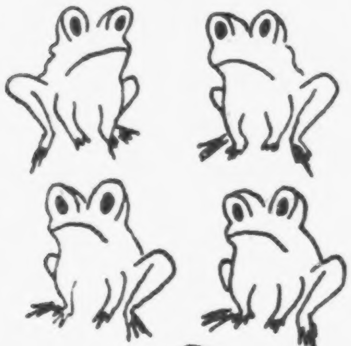
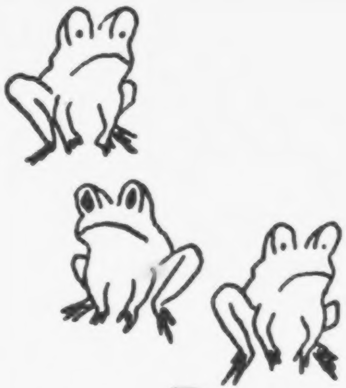
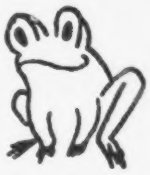
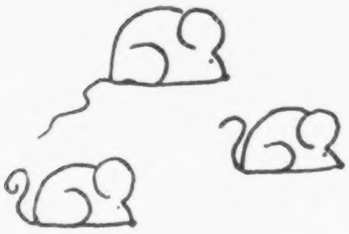
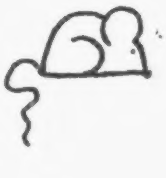
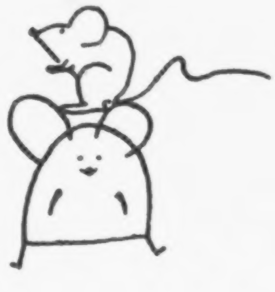
ADDITION AND SUBTRACTION

Skill 2

Name____________________

Date____________________

Ring the correct numerals.

 4 [✓ 5] 3	 [✓ 3] 2 4	→	 [✓ 2] 3 1
 3 [✓ 4] 5	 4 [✓ 3] 2	→	 [✓ 1] 3 2
 4 [✓ 3] 2	 2 3 [✓ 1]	→	 [✓ 2] 3 1

LEVEL A

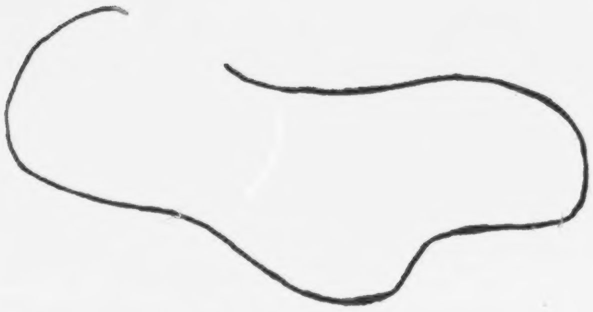
NON-METRIC GEOMETRY

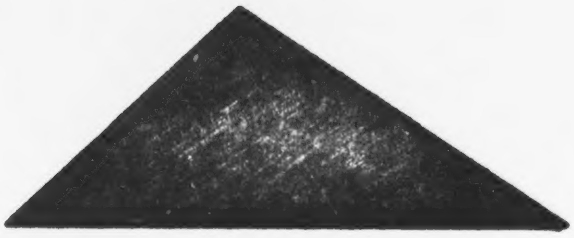
Skill 4

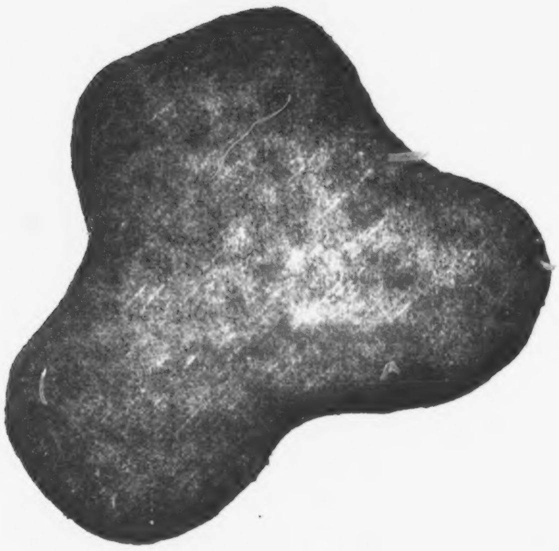
Name ____________________

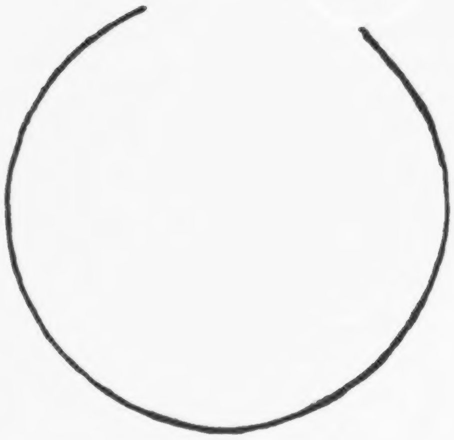
Date ____________________

Color the inside of the closed curves.









LEVEL A

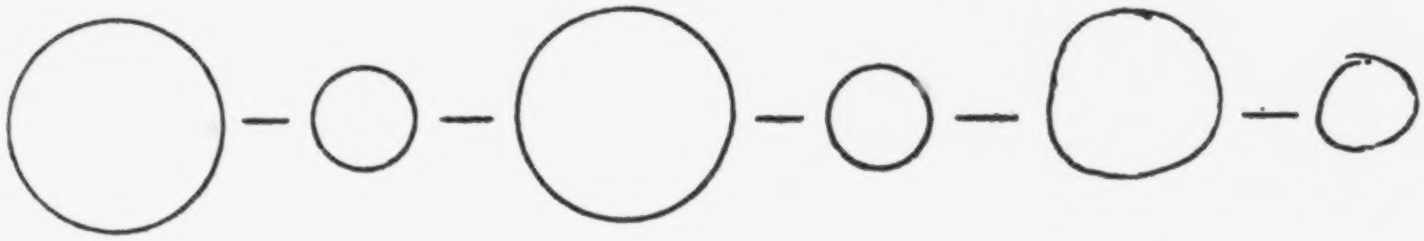
SPECIAL TOPICS

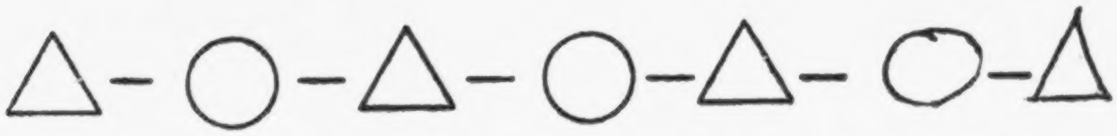
Skill 1

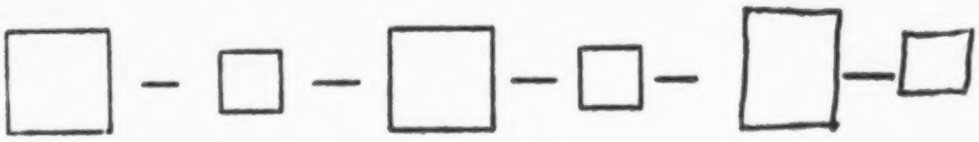
Name ______________________

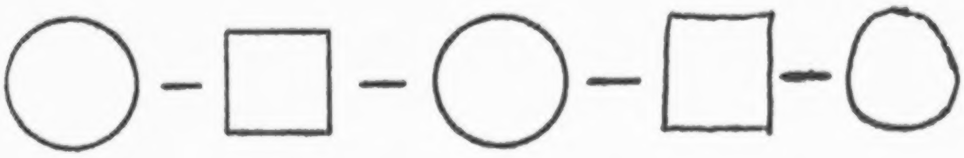
Date ______________________

Complete the pattern.









MATHEMATICS CONTINUUM

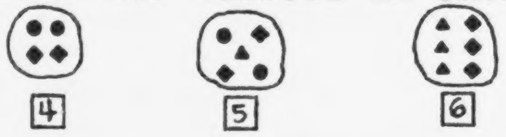
LEVEL B

BOOK 1

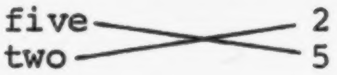
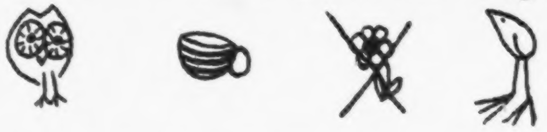
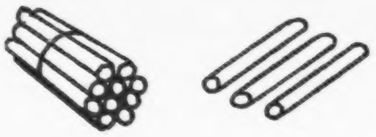
Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and Continuum mastery tests should be used to provide sufficient evidence to check the 70 - 100% (mastery level) for each skill.

It is suggested that Fractions be taught before Geometry topics are introduced since some activities in the Geometry sections may involve knowledge of fractional parts.

LEVEL B

NUMERATION	Example Numeration
Review of Level A Skills A Numeration 1 A Numeration 2 A Numeration 3	
*1. Recognizes the cardinal number of a set.	
*2. Writes the digits from 0 to 9.	
*3. Reads numerals from any starting point when presented with an ordered arrangement, 0 to 100.	"Read these numbers starting here and ending here." (Given an ordered sequence from 1 to 100, child reads the indicated block of numbers. e.g. 20 to 45.)
*4. Counts orally by ones to 100.	
*5. Counts orally by tens to 100 from any multiple of ten starting point.	"Count by tens from 20 to 80."
6. Writes numerals 1 to 10, from left to right on an ordered set of pictures.	"Write the numeral in each ☐." 
7. Writes numerals from 1 to 100 in sequential order, or on an ordered set of pictures, or completes dot to dot pictures.	"Write the missing numerals." "Connect the dots in order."
8. Writes numerals in sequential forward or reverse order for small blocks of numbers, or completes dot to dot pictures.	"Write the missing numerals." 32 33 34 35

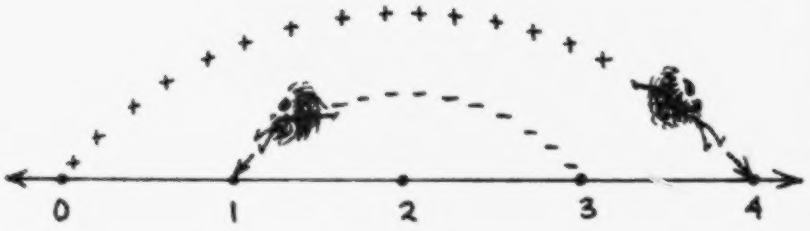
Textual Resources	Related Resources	Notes
Numeration		
Review		
HM Book 1, pp. 1, 2		
HM Book 1, pp. 3, 4		
HM Book 1, pp. 5-10	HM Visuals 1 (1)	
1. HM Book 1, pp. 11-40		
2. HM Book 1, pp. 11-14, 17-24, 26, 28-38, 40	HM Visuals 1 (2-4) HM Masters 1 (1-5)	
3.		
4.		
5.		
6.		
7. HM Book 1, pp. 55, 56, 213, 254		
8. HM Book 1, pp. 145, 146, 150, 245, 246, 255	HM Visuals 1 (15) HM Masters 1 (22)	

LEVEL B	Example
Numeration	**Numeration**
9. Identifies what number comes immediately before or after a given number or between two numbers, for numbers to 100, with or without structured groups.	"What number comes after:" 17 $\boxed{18}$ 9 $\boxed{10}$
10. Selects the greater (greatest), smaller (smallest) for numbers zero to 100. Places > or < between two numbers to indicate the greater or lesser.	"Write > or < in each ○ ." 9 $\textcircled{>}$ 6
11. Reads words orally and matches words with numerals or structured groups when given number words for numbers zero to ten.	"Match the number words with the numerals." 
12. Places an X on the object with the specified ordinal position to the twelfth.	"Put an X on the third object." 
13. States, selects, or writes the cardinal number for structured groups of up to 100 objects as ___ tens and ___ ones. Oral or written directions.	"Write the numeral in each ☐ ."  $\boxed{1}$ tens $\boxed{3}$ ones
14. In-Depth.	

Textual Resources	Related Resources	Notes
Numeration		
9. HM Book 1, p. 147		
10. HM Book 1, pp. 41-54, 135, 136, 148	HM Visuals 1 (5-7)	
11.		
12. HM Book 1, teacher's page 45, 73		
13. HM Book 1, pp. 121-134, 137-144, 149, 247, 248, 257 In-Depth, 251-253 256-262	HM Visuals 1 (14, 22) HM Masters 1 (20, 21, 45, 46)	
14. HM Book 1, pp. 311-316		

LEVEL B

ADDITION AND SUBTRACTION



1. Rings or writes the number of objects in each of two sets and the number of objects when put together. Sums to 5.

2. Circles or writes in numerals (missing sums and/or addends) to make true number sentences for pictured or number line addition and subtraction situations. Number sentences contain +, -, and = signs. Sums to 12.
   Teacher note: Begin development of the commutative principle for addition and the inverse operation of addition and subtraction.

   a. Combinations to 5

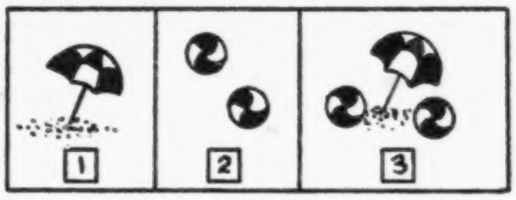
   b. Combinations to 10

3. Finds the sums, differences, or missing addends for addition and subtraction fact statements with + and - signs. Problems written in both horizontal and vertical form. No pictured groups as aids. Timed mastery test. Sums to 12.

Example

Addition and Subtraction

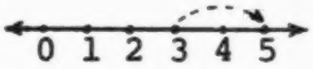
"Write the numeral in each ☐ ."



"Draw the move on the number line."

"Write the numeral in each ☐ ."

$3 + \boxed{2} = 5$



"Name the sum or missing addend."

$5 - \boxed{3} = 2$

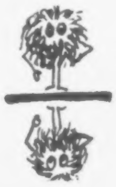
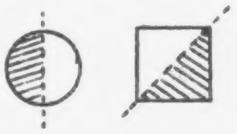
$$\begin{array}{r} 5 \\ +\ 2 \\ \hline \boxed{7} \end{array}$$

Textual Resources	Related Resources	Notes
Addition and Subtraction		
1. HM Book 1, pp. 57-60		
2.		
Combinations to 5: HM Book 1, pp. 61-68, 70-82, 99-102, 119	HM Visuals 1 (8-10) HM Masters 1 (6, 8, 9, 14)	
Combinations to 10: HM Book 1, pp. 151, 157, 173, 174, 239-242	HM Masters 1 (41, 42)	
3.		

LEVEL B Addition and Subtraction	Example Addition and Subtraction
3. (cont.)	
a. Combinations to 5	
b. Combinations to 10	
c. Combinations to 12	
4. Writes or completes a pair of equations that illustrate the commutative principle for addition. Sums to 12.	"Write the numeral in each $\square$." $\boxed{4} + 1 = 5$ | $\boxed{1} + 4 = 5$
Combinations to 5	
5. Completes addition and subtraction sentences with missing sums or missing addends associated with certain number families. Inverse operation. Sums to 12.	"Write the numeral in each $\square$." $5 + 1 = \boxed{6}$ $1 + 5 = \boxed{6}$ $6 - 1 = \boxed{5}$ $6 - 5 = \boxed{1}$
a. Combinations to 5	
b. Combinations to 10	
c. Combinations to 12	
6. Selects other names for numbers by matching addition or subtraction expressions with pictured groups or numerals to 12.	"Write names for four." $\boxed{4}$ $\boxed{3} + \boxed{1}$ $\boxed{2} + \boxed{2}$ $\boxed{1} + \boxed{3}$

Textual Resources	Related Resources	Notes
Addition and Subtraction		
3.		
Combinations to 5: HM Book 1, pp. 87, 88, 105, 107, 108, 120	HM Masters 1 (16, 19)	
Combinations to 10: HM Book 1, pp. 157, 158, 172, 244, 309	HM Masters 1 (23, 43)	
Combinations to 12: HM Book 1, pp. 289, 293, 294, 302, 303, 305	HM Masters 1 (55, 56)	
4.		
Combinations to 5: HM Book 1, pp. 69, 89, 90	HM Masters 1 (7)	
5.		
Combinations to 5: HM Book 1, pp. 91-97	HM Masters 1 (10, 11)	
Combinations to 10: HM Book 1, pp. 152-155, 159-162, 165-169, 195, 196, 219-223, 227, 228, 235, 236	HM Visuals 1 (21) HM Masters 1 (25, 26, 32, 34, 38)	
Combinations to 12: HM Book 1, pp. 278, 283, 284, 291		
6. HM Book 1, pp. 83-86, 98, 163, 164, 170, 171, 225, 226, 229, 230, 233, 234, 237, 238, 243, 281, 282, 287, 288, 306, 317, 318	HM Visuals 1 (11, 16, 17, 21) HM Masters 1 (12, 24, 27, 35, 39, 51, 52, 54)	

LEVEL B	Example
Addition and Subtraction	Addition and Subtraction
7. Solves or completes one step word problems with pictures which require the use of addition and subtraction facts through sums to 12.	"Susan had 3 dolls. For her birthday she received 1 more. How many does she have now?"
8. Says the word: plus (and), minus (less), and is equal to when confronted with symbols +, -, and =. Circles the numerals which indicate the sum or addends in a number sentence. (Students should be able to do this as a result of oral usage in previous skills.)	"Read this number sentence aloud." 5 + 4 = 9
9. Writes the missing operation symbol or relation symbol to make a number sentence true.	"Write > , < , or = in each ○ . " 5 - 2 ⧀ 4
10. In-Depth.	

FRACTIONS 	Fractions
1. Identifies one-half or one-fourth of an object or set of objects.	"Shade one - half of each region." 

Textual Resources	Related Resources	Notes
Addition and Subtraction		
7. HM Book 1, pp. 197, 198 teacher's page 214, 215		
8.		
9. HM Book 1, pp. 103, 104, 106, 156, 180, 231, 301	HM Masters 1 (15, 28, 36, 58)	
10. Associative property: HM Book 1, pp. 175-179, 181, 182, 215-218, 224, 232, 277, 279, 280, 285, 286, 290, 292, 307, 308	HM Visuals 1 (18, 25) HM Masters 1 (31, 33, 37, 53, 59)	
Adding and subtracting with tens and ones. HM Book 1, pp. 249, 250, 263-276, 295-300, 304, 310	HM Visuals 1 (23, 24) HM Masters 1 (44, 47, 48, 49, 57, 60)	

Fractions		
1. HM Book 1, pp. 113, 114 199, 200, 202, 203	HM Visuals 1 (13, 20)	

LEVEL B

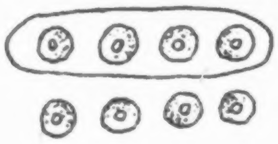
Fractions

2. Divides an object or set of objects in halves or fourths.

3. Mixed Practice.

Example

"Ring one-half of each set."



NON-METRIC GEOMETRY

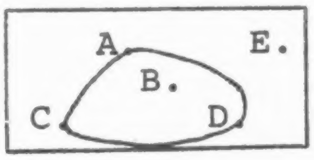
Review of Level A Skills

A Non-Metric Geometry 3
A Non-Metric Geometry 4

Non-Metric Geometry

1. Identifies specific points inside and outside and on closed curves.

"Draw closed curves with the points: On, Inside, and Outside."



On - A C D
Inside - B
Outside - E

2. Identifies the following figures as special closed curves: triangle, rectangle, square, circle. Responds to these words when used in directions.

"Ring the squares."

"Draw lines under the circles."

3. Identifies the area inside a closed curve as a region.

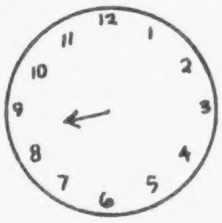
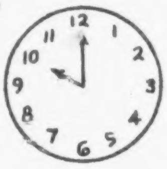
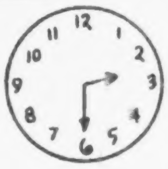
"Complete the curves in blue. Color the inside of the triangle red."

Textual Resources	Related Resources	Notes
Fractions		
2. HM Book 1, pp. 201, 204	HM Visuals 1 (20) HM Masters 1 (30)	
3. HM Book 1, p. 214		
Non-Metric Geometry		
Review		
HM Book 1, p. 183	HM Visuals 1 (19)	
HM Book 1, p. 184		
1. HM Book 1, pp. 185-188	HM Visuals 1 (19)	
2. HM Book 1, pp. 189-192		
3. HM Book 1, pp. 189-194	HM Masters 1 (29)	

LEVEL B

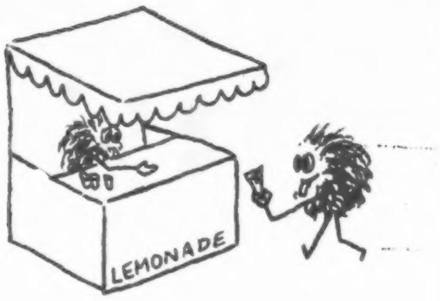
METRIC GEOMETRY

Review of Level A Skills A Metric Geometry 1	Example Metric Geometry
1. Uses the inch as a standard unit of measure.	"Measure each line segment. Write the numeral in each ☐ ." A.____________________ $\boxed{2}$ inches
*2. States and shows how many cups are equivalent to a pint and how many pints are equivalent to a quart and vice versa.	"How many cups will it take to fill this pint jar?"

TIME	Time
1. Writes numerals to twelve on a clockface.	"Write the numerals on the clockface."
2. States that it is ___o'clock, past ___o'clock or before ___o'clock when presented with a clockface which has only an hour hand pointing to or between numerals on the face.	"This clockface shows that it is past _8_ o'clock." 
3. States that it is ___o'clock when presented with a completed clockface with two hands.	"This clockface shows that it is _10_ o'clock." 
4. States that it is half past ____ when presented with a completed clockface with two hands.	"This clockface shows that it is half past _2_ o'clock." 

Textual Resources	Related Resources	Notes
Metric Geometry		
Review		
HM Book 1, pp. 205, 206		
1. HM Book 1, pp. 207-210 In-Depth pp. 211, 212		
2. HM Book 1, teacher's page 134-137 HM Book 1, pp. 109-112	HM Visuals 1 (12) HM Masters 1 (18)	

Time		
1.		
2.		
3. HM Book 1, pp. 115, 116		
4. HM Book 1, pp. 117, 118	HM Masters 1 (19)	



LEVEL B MONEY	Example Money
1. Selects the coin: penny, nickel, dime, when presented with the coins or pictures.	"Show me a nickel."
2. Matches coins, pennies nickels, or pictures of them with their numerical value or with value in other coins.	"Show me the number of pennies that are equivalent to a nickel."
3. Finds the value of collections of pennies, nickels and dimes and responds to use of ¢ sign.	"What is the total value of this set of coins?"
4. In-Depth.	

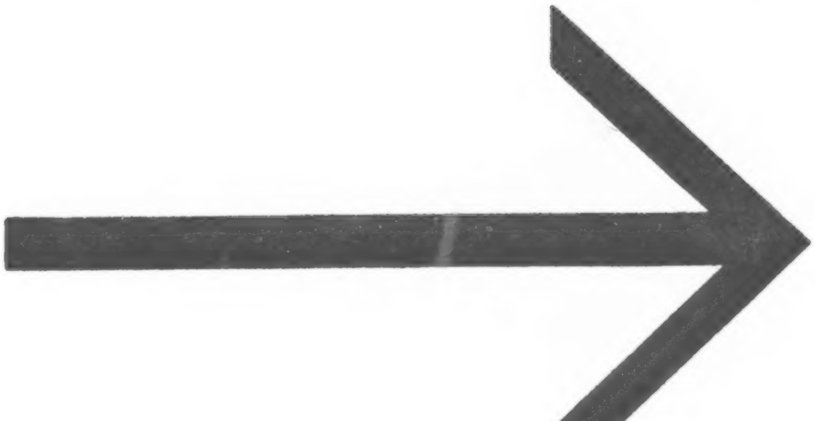
Textual Resources	Related Resources	Notes
Money		
1.	Felt and Magnetic Enlarged U.S. Coins	
2. HM Book 1, pp. 99, 138	HM Masters 1 (13)	
3. HM Book 1, pp. 100, 127	HM Masters 1 (40, 50)	
4. HM Book 1, pp. 238, 273, 274	HM Masters 1 (40)	

LEVEL B

TESTS

and

ANSWER KEYS



LEVEL B

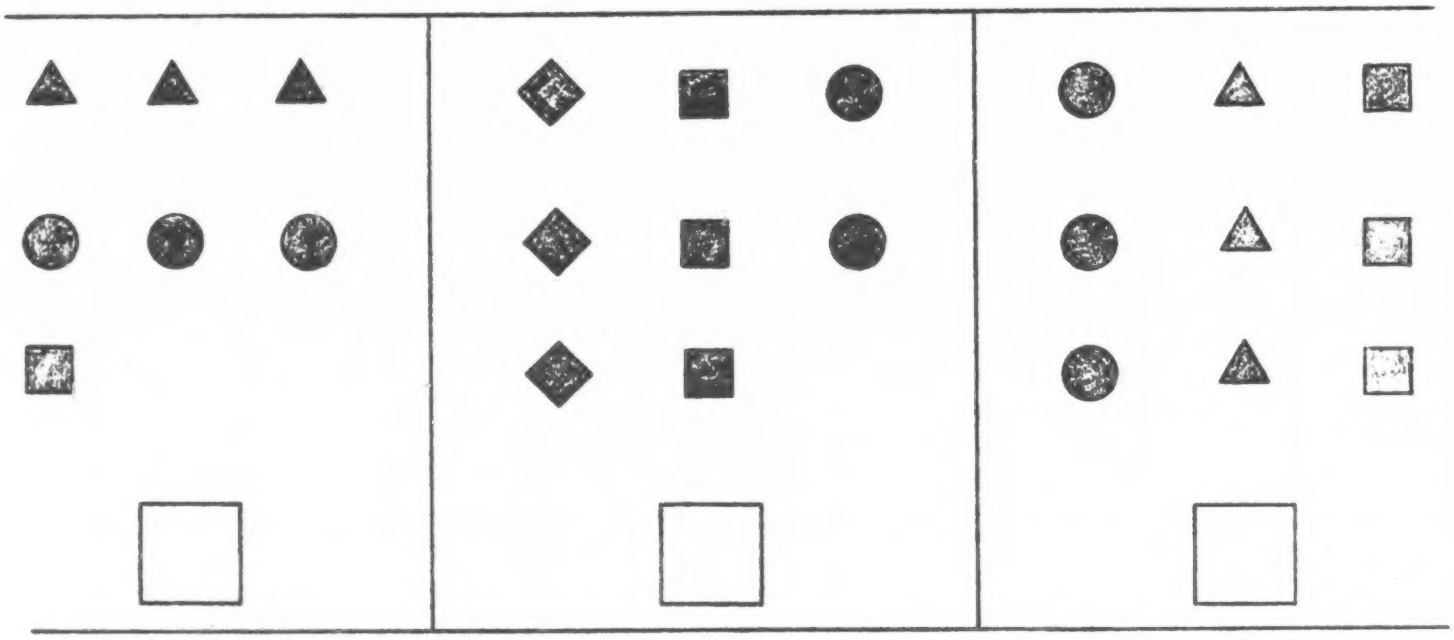
NUMERATION

Skill 6, 8

Name ____________________

Date ____________________

1. Write the numeral in each □ .



2. Write the numerals from 72 to 45 backwards.

72									
62									
							45	44	43

LEVEL B

NUMERATION

Skill 7

Name ____________________

Date ____________________

1. Write numerals (1 - 100) forward.

0									
100									

LEVEL B
NUMERATION
Skill 9

Name ______________________________
Date ______________________________

Write in the missing number.

AFTER

56, _____

28, _____

70, _____

32, _____

BEFORE

_____, 51

_____, 63

_____, 89

_____, 15

BETWEEN

65, _____, 67

27, _____, 29

44, _____, 46

96, _____, 98

BEFORE AND AFTER

_____, 86, _____

_____, 82, _____

_____, 42, _____

_____, 47, _____

LEVEL B
NUMERATION
Skill 10

Name ______________________

Date ______________________

1. Draw a circle around the largest number.
   7 5 9

2. Draw a circle around the smallest number.
   73 37 75

3. Put > or < in the circles.

87 ○ 88

49 ○ 45

35 ○ 30

91 ○ 93

99 ○ 8

42 ○ 71

18 ○ 34

9 ○ 10

0 ○ 2

5 ○ 7

8 ○ 2

1 ○ 9

LEVEL B

NUMERATION

Skill 11

Name ____________________

Date ____________________

Draw a ring around the numeral that means the same as the number word.

Eight	3 8 9	Two	6 2 3
Four	6 5 4	Six	6 9 7
Three	1 9 3	Ten	4 10 3
Nine	5 9 3	Five	2 5 8
One	8 7 1	Seven	6 3 7

LEVEL B

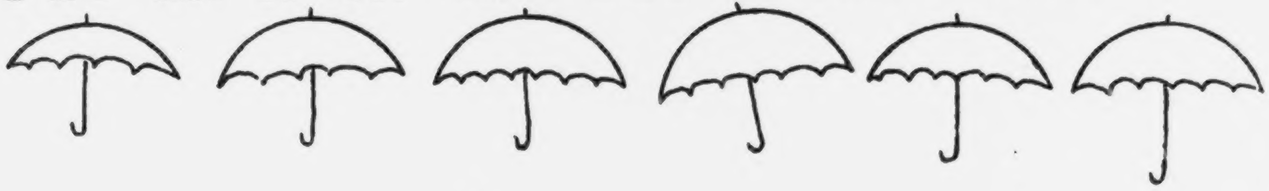
NUMERATION

Skill 12

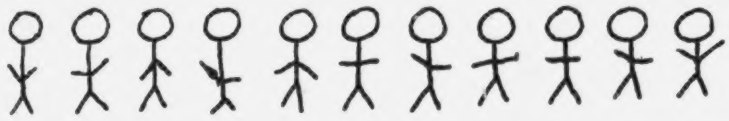
Name ______________________

Date ______________________

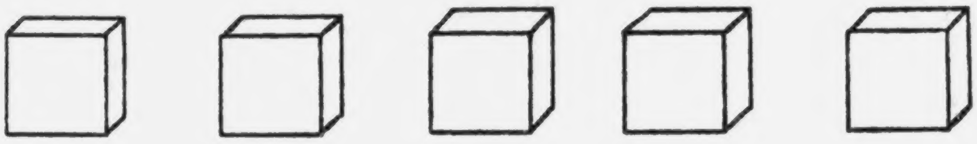
1. Put an X on the fifth umbrella.



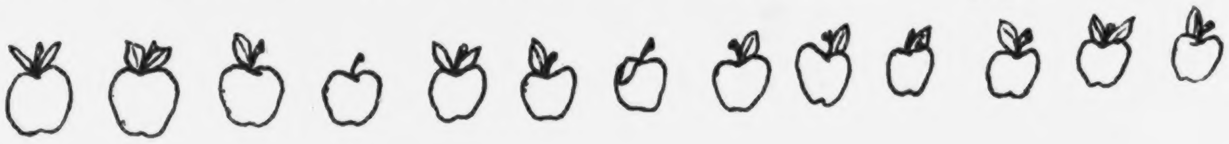
2. Put an X on the seventh boy.



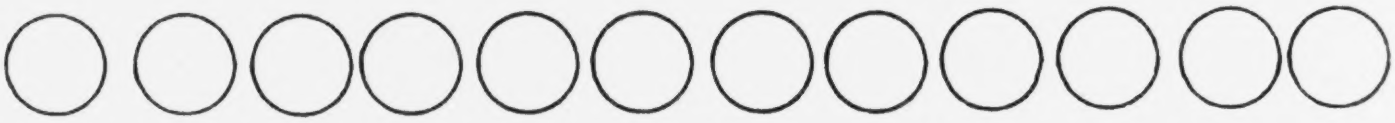
3. Put an X on the third box.



4. Put an X on the eleventh apple.



5. Put an X on the twelfth circle.



LEVEL B

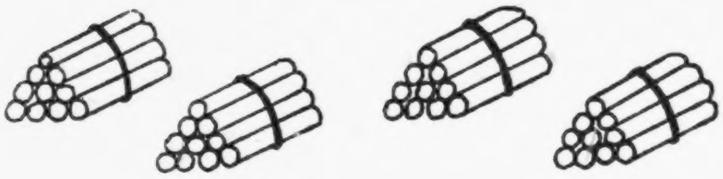
NUMERATION

Skill 13

Name ______________________

Date ______________________

1. Write the number of tens and ones in these pictures.



1.________ tens

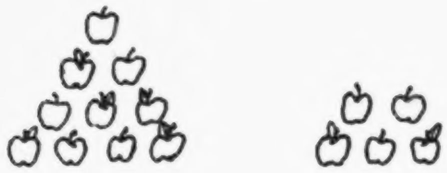
________ ones

2.

2.________ tens

________ ones

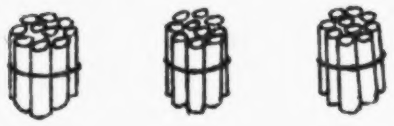
3.



3.________ tens

________ ones

4.



4.________ tens

________ ones

LEVEL B

ADDITION AND SUBTRACTION

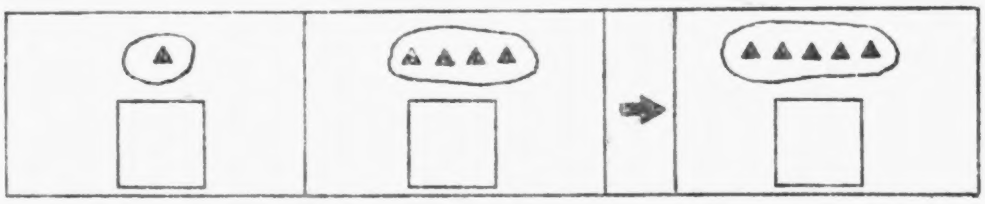
Skill 1, 2

Name ____________________

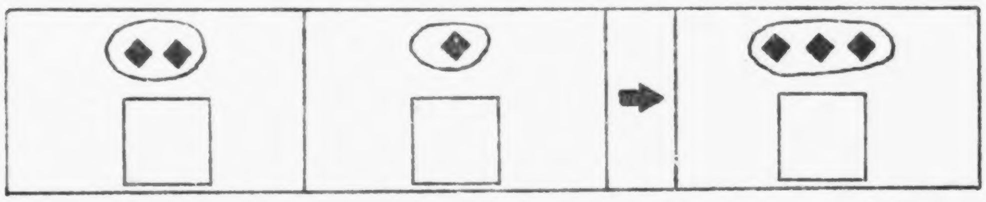
Date ____________________

Write the numeral in each ☐ .

1.

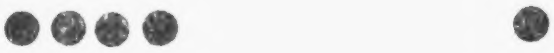


2.



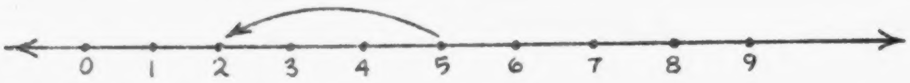
Write the numeral in the ☐ .

1.



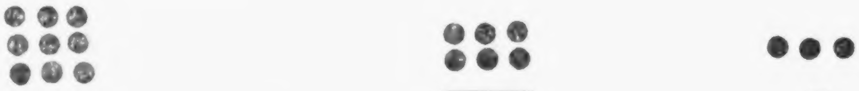
4 + ☐ 5

2.


0
1
2
3
4
5
6
7
8
9

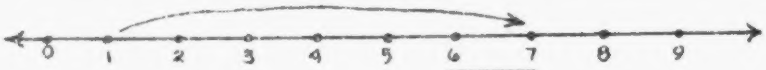
☐ - 3 = 2

3.



9 - ☐ = 3

4.


0
1
2
3
4
5
6
7
8
9

1 + ☐ = 7

LEVEL B

Name ______________________________

ADDITION AND SUBTRACTION

Date ______________________________

Skill 3 (Page 1 of 5 pages)

Timed: 5 minutes

ADD.

$\begin{array}{r} 7 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ +5 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +1 \\ \hline \end{array}$
$\begin{array}{r} 3 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +1 \\ \hline \end{array}$
$\begin{array}{r} 9 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +6 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$
$\begin{array}{r} 2 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ +6 \\ \hline \end{array}$
$\begin{array}{r} 2 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ +5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ +4 \\ \hline \end{array}$

LEVEL B

ADDITION AND SUBTRACTION

Skill 3 (Page 2 of 5 pages)

Timed: 5 minutes

Name ______________________________

Date ______________________________

ADD.

9 +1	6 +6	3 +2	4 +3	1 +5	2 +3
3 +5	6 +3	7 +3	2 +7	8 +4	5 +6
5 +2	4 +2	1 +2	5 +3	5 +1	5 +7
4 +7	6 +5	4 +6	7 +4	3 +7	3 +9
3 +8	7 +5	2 +6	9 +3	4 +8	3 +4

LEVEL B

Name ______________________________

ADDITION AND SUBTRACTION

Date ______________________________

Skill 3 (Page 3 of 5 pages)

Timed: 5 minutes

Subtract.

8 −1	11 −2	7 −2	10 −2	8 −4	5 −1
4 −1	9 −1	7 −1	9 −4	6 −3	2 −1
11 −9	4 −3	7 −6	8 −7	3 −1	10 −5
4 −2	9 −7	10 −1	9 −8	8 −2	9 −3
6 −4	9 −5	11 −3	10 −8	10 −4	5 −4

LEVEL B

ADDITION AND SUBTRACTION

Skill 3 (Page 4 of 5 pages)

Timed: 5 minutes

Name ____________________

Date ____________________

Subtract.

$\begin{array}{r} 10 \\ -9 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -1 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ -3 \\ \hline \end{array}$
$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ -5 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ -5 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ -5 \\ \hline \end{array}$
$\begin{array}{r} 11 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ -7 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ -7 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ -3 \\ \hline \end{array}$
$\begin{array}{r} 11 \\ -8 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ -7 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -6 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ -9 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ -8 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ -4 \\ \hline \end{array}$

LEVEL B
ADDITION AND SUBTRACTION
Skill 3 (5 of 5 pages)

Name ______________________________
Date ______________________________

Find the sum or difference.

$$\begin{array}{r} 8 \\ -\ 5 \\ \hline \end{array} \qquad \begin{array}{r} 6 \\ +\ 4 \\ \hline \end{array} \qquad \begin{array}{r} 7 \\ -\ 0 \\ \hline \end{array} \qquad \begin{array}{r} 2 \\ +\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 10 \\ -\ 4 \\ \hline \end{array}$$

8 + 7 =

9 - 2 =

4 + 3 =

10 - 1 =

11 + 5 =

LEVEL B

ADDITION AND SUBTRACTION

Skill 4, 5

Name ______________________

Date ______________________

Write the numeral in each □.

2 + □ = 6

4 + 2 = □

□ + 2 = 8

6 + □ = 8

5 + □ = 9

□ + 5 = 9

7 + 3 = □

3 + □ = 10

0 + □ = 12

□ + 0 = 12

---

4 + □ = 7

□ + 3 = 7

5 + □ = 7

□ + 2 = 7

1 + 6 = □

6 + □ = 7

□ - 3 = 4

7 - 4 = □

LEVEL B

ADDITION AND SUBTRACTION

Skill 6

Name ______________________________

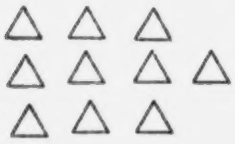
Date ______________________________

Circle all numbers which are names for how many are in the sets.

1.

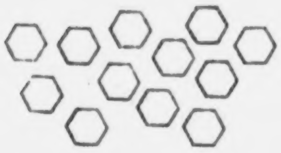
10-3   6   4+3

---

2. 

11   6+4   12-2

---

3. 

12-6   2+10   10

---

4. 8

7+1   8-1   2+5   5-3

6+1   8   2+4

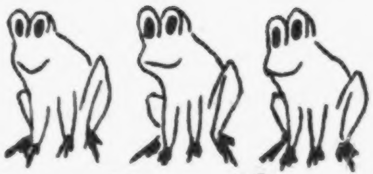
6+2   8-0   2+6   4+3

LEVEL B　　　　　　　　　　Name ______________________

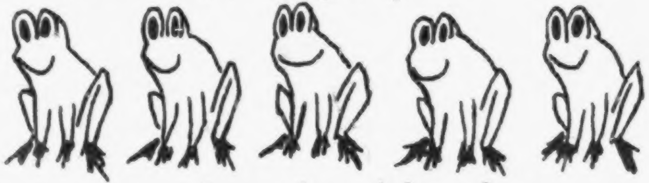
ADDITION AND SUBTRACTION　　　Date ______________________

Skill 7

1. Dick has 3



Sam has 5



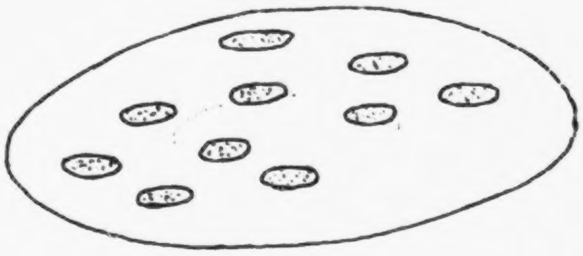
How many frogs do both boys have together?

____

---

2. There were 10 cookies on the plate.

Jim ate 4 of them.



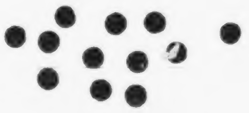
How many were left?

____

---

3. Joe had 12 marbles in his pocket.

He lost 5.



How many were left?

____

LEVEL B

ADDITION AND SUBTRACTION

Skill 8, 9

Name ______________________________

Date ______________________________

1. Ring the addends.

$5 + 4 = 9$ $9 - 5 = 4$ $8 = 6 + 2$

---

2. Draw a line under the sums.

$3 + 2 = 5$ $6 = 4 + 2$ $7 - 5 = 2$

---

3. Write the correct sign $=$, $>$ or $<$ in each ○ .

4 ○ $5 + 1$ $5 - 1$ ○ $5 - 4$

$4 + 0$ ○ $3 + 1$ $2 + 1$ ○ 3

LEVEL B

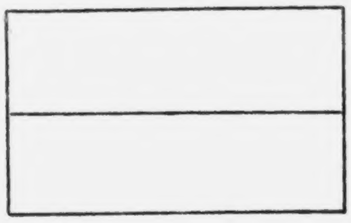
FRACTIONS

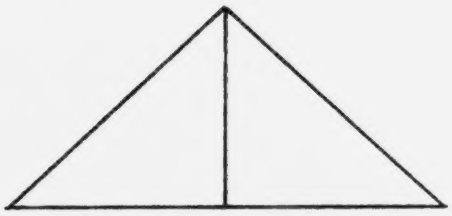
Skill 1, 2

Name ______________________

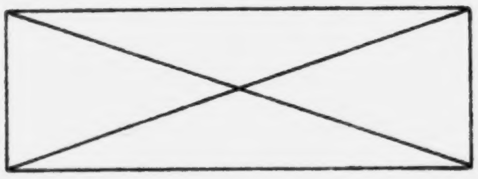
Date ______________________

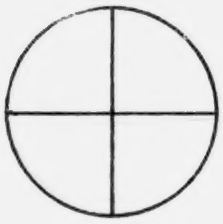
Shade one-half of each region.



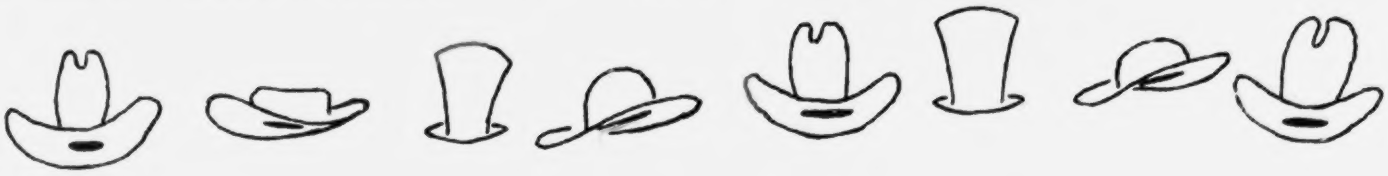


Shade one-fourth of each region.

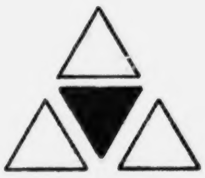


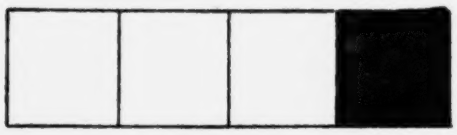


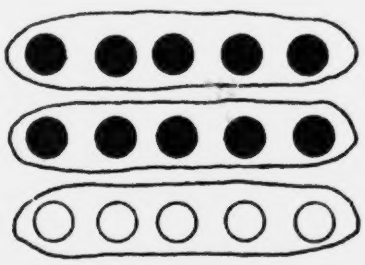
Circle one-half of the hats.

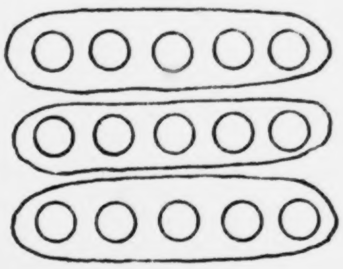


Draw a line under the pictures that show one-fourth.









LEVEL B

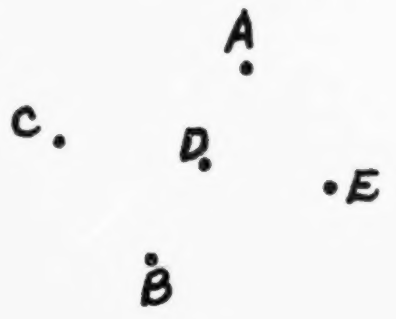
NON-METRIC GEOMETRY

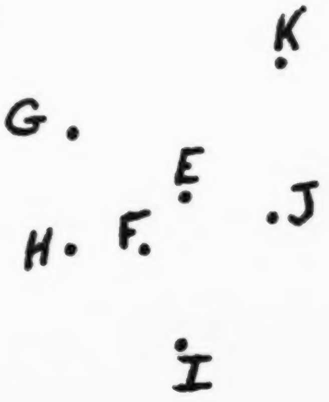
Skill 1, 3

Name ______________________

Date ______________________

1. Draw closed curves with the points on, inside, and outside.





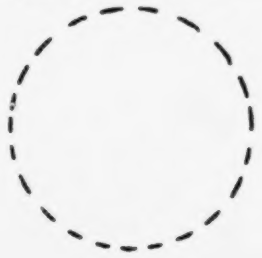
On - A,B,C
Inside - D
Outside - E

On - G,H,I,J
Inside - E,F
Outside - K

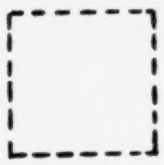
---

2. Complete each curve in blue.

Color the inside of the circle red.



Color the inside of the square yellow.



LEVEL B

NON-METRIC GEOMETRY

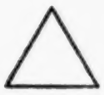
Skill 2

Name ____________________________

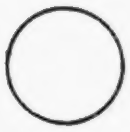
Date ____________________________

Match the word with the figure.

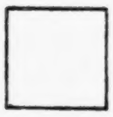
1. circle



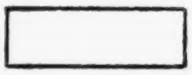
2. triangle



3. rectangle



4. square



Just for fun.

Color the triangle	green
Color the circle	yellow
Color the square	red
Color the rectangle	blue

LEVEL B

METRIC GEOMETRY

Skill 1

Name ______________________

Date ______________________

Measure each line segment.

Write the numeral in each ☐ .

A. ____________________ ☐

B. _______ ☐

A. ___________________________ ☐

B. ______________ ☐

A. ___________________________ ☐

B. ____________________ ☐

LEVEL B

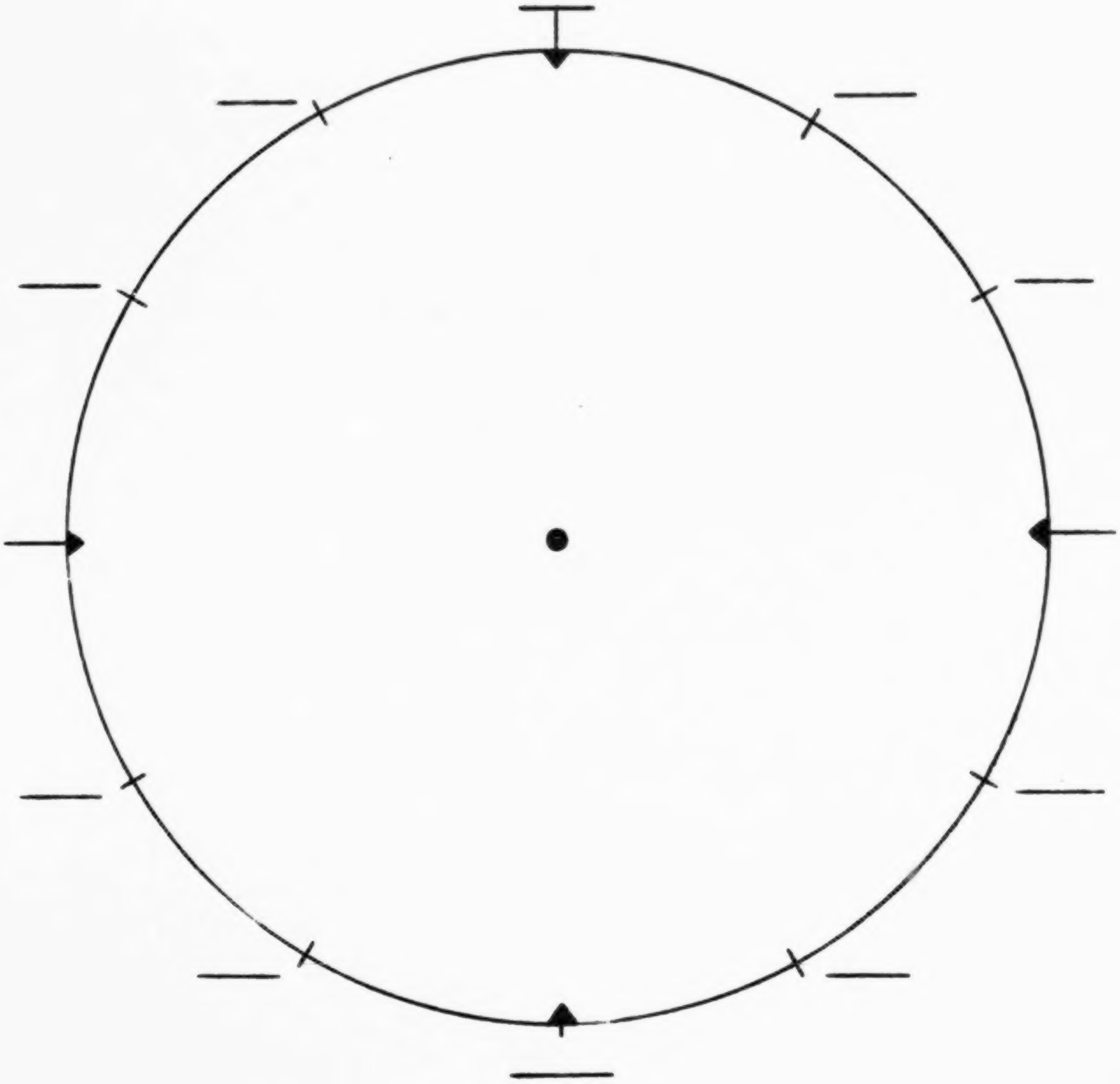
TIME

Skill 1

Name ____________________

Date ____________________

Write all the numerals on this clockface.

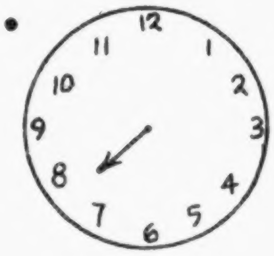


LEVEL B Name ____________________

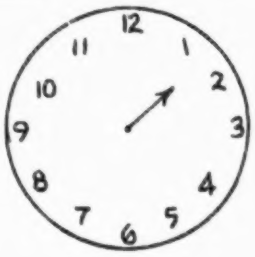
TIME Date ____________________

Skill 2

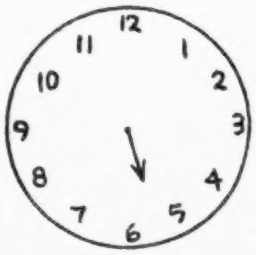
1. This clockface shows that it is past ________ o'clock and before ________ o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

2. This clockface shows that it is past ________ o'clock and before ________ o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

3. This clockface shows that it is past ________ o'clock and before ________ o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

LEVEL B

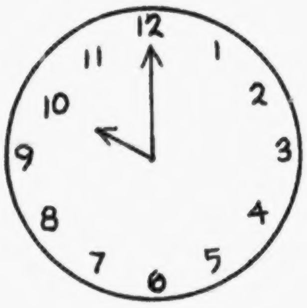
TIME

Skill 3, 4

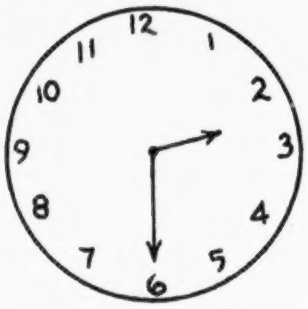
Name ______________________

Date ______________________

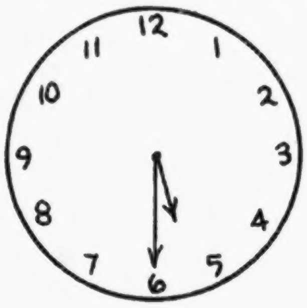
1. This clockface shows that it is ______ o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

2. This clockface shows that it is half past _________ o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

3. This clockface shows that it is half past _________ o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

LEVEL B

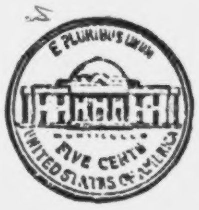
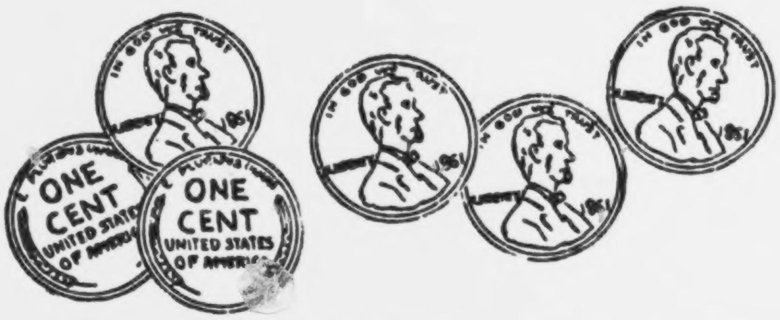
MONEY

Skill 2

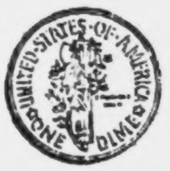
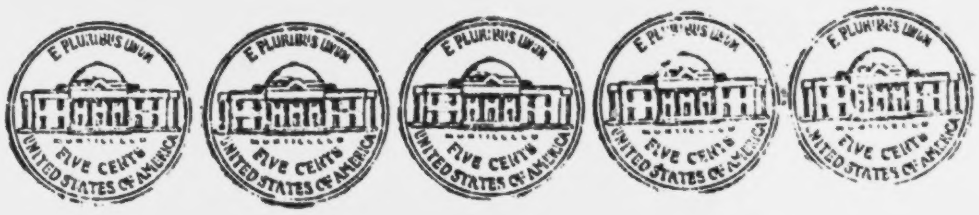
Name ______________________________

Date ______________________________

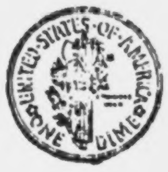
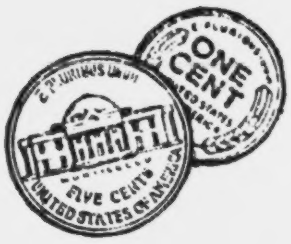
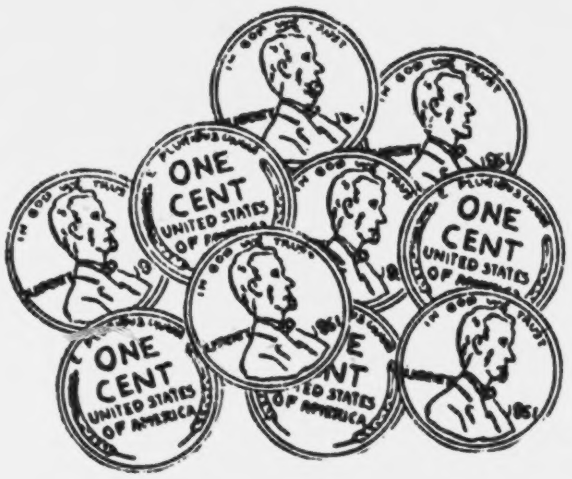
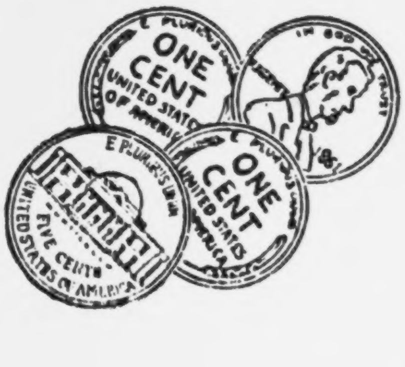
1. Circle the number of pennies that equals a nickel.

2. Circle the number of nickels that equals a dime.

3. Circle the set of coins that equals a dime.

LEVEL B

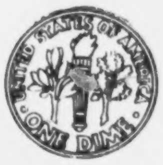
MONEY

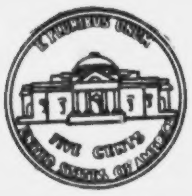
Skill 1

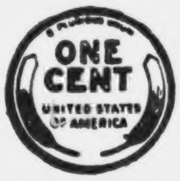
Name ____________________

Date ____________________

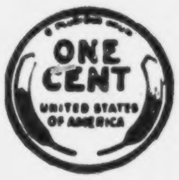
1. Put an X on the picture of a nickel.

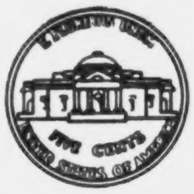

UNITED STATES OF AMERICA
ONE DIME

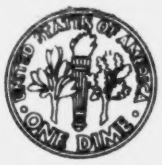

FIVE CENTS
UNITED STATES OF AMERICA


ONE CENT
UNITED STATES OF AMERICA

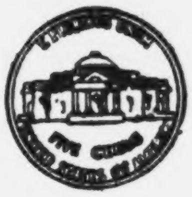
2. Put an X on the picture of a penny.

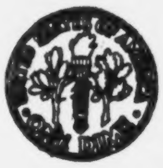

ONE CENT
UNITED STATES OF AMERICA

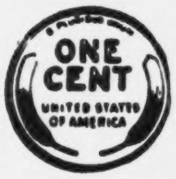

FIVE CENTS
UNITED STATES OF AMERICA


UNITED STATES OF AMERICA
ONE DIME

3. Put an X on the picture of a dime.


FIVE CENTS
UNITED STATES OF AMERICA


UNITED STATES OF AMERICA
ONE DIME


ONE CENT
UNITED STATES OF AMERICA

LEVEL B

MONEY

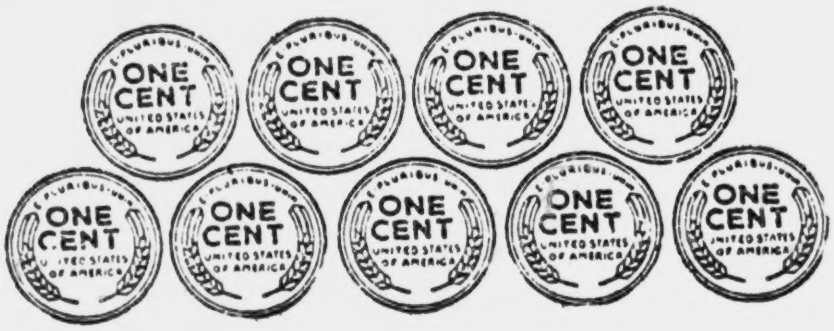
Skill 3

Name ______________________________

Date ______________________________

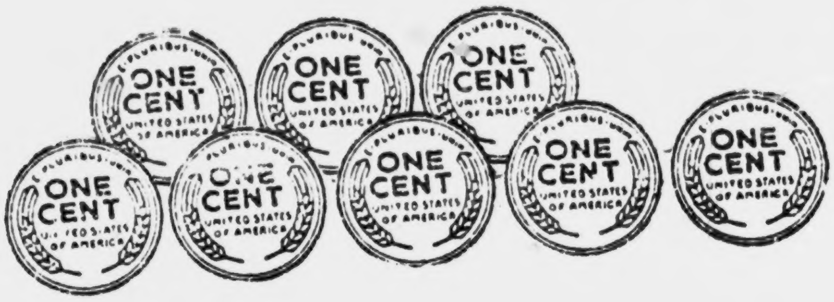
How many cents are there in these sets?

1.



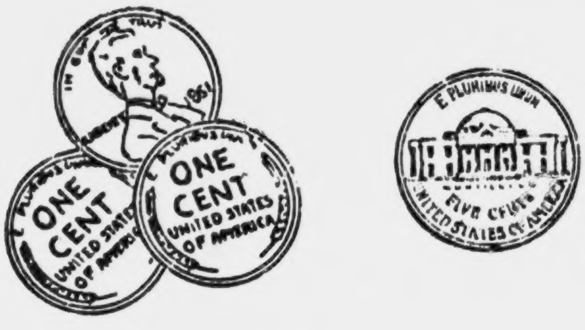
______ ¢

2.



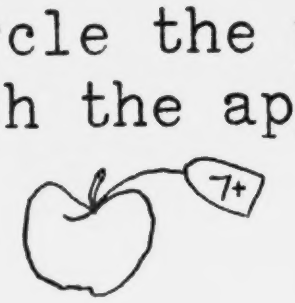
______ ¢

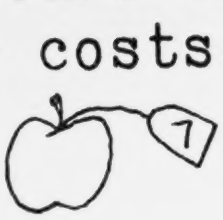
3.

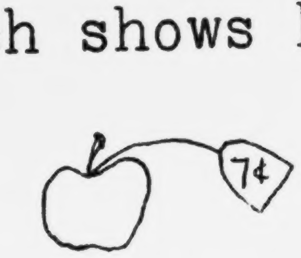


______ ¢

4. Circle the picture which shows how much the apple costs.







LEVEL B

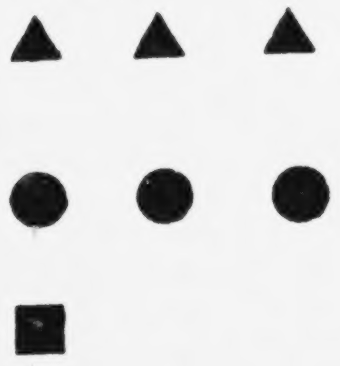
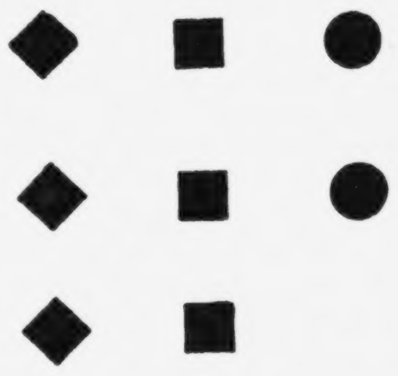
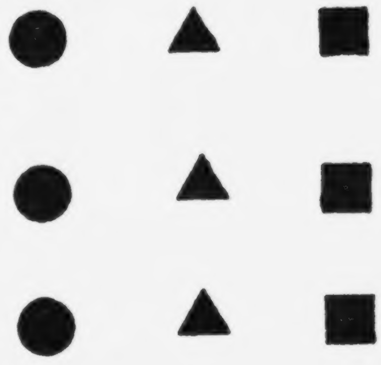
NUMERATION

Skill 6, 8

Name ____________________

Date ____________________

1. Write the numeral in each ☐.

		
$\boxed{7}$	$\boxed{8}$	$\boxed{9}$

2. Write the numerals from 72 to 45 backwards.

72	71	70	69	68	67	66	65	64	63
62	61	60	59	58	57	56	55	54	53
52	51	50	49	48	47	46	45	44	43

LEVEL B

NUMERATION

Skill 7

Name ____________________

Date ____________________

1. Write numerals (1 - 100) forward.

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99
100									

LEVEL B

NUMERATION

Skill 9

Name ____________________

Date ____________________

Write in the missing number.

AFTER

56, 57

28, 29

70, 71

32, 33

BEFORE

50, 51

62, 63

88, 89

14, 15

BETWEEN

65, 66, 67

27, 28, 29

44, 45, 46

96, 97, 98

BEFORE AND AFTER

85, 86, 87

81, 82, 83

41, 42, 43

46, 47, 48

LEVEL B

NUMERATION

Skill 10

Name ______________________

Date ______________________

1. Draw a circle around the largest number.
   7 5 [✓ 9]

2. Draw a circle around the smallest number.
   73 [✓ 37] 75

3. Put > or < in the circles.

87 ⧀ 88

49 ⧁ 45

35 ⧁ 30

91 ⧀ 93

99 ⧁ 8

42 ⧀ 71

18 ⧀ 34

9 ⧀ 10

0 ⧀ 2

5 ⧀ 7

8 ⧁ 2

1 ⧀ 9

LEVEL B

NUMERATION

Skill 11

Name ____________________

Date ____________________

Draw a ring around the numeral that means the same as the number word.

Eight	3 [✓ 8] 9	Two	6 [✓ 2] 3
Four	6 5 [✓ 4]	Six	[✓ 6] 9 7
Three	1 9 [✓ 3]	Ten	4 [✓ 10] 3
Nine	5 [✓ 9] 3	Five	2 [✓ 5] 8
One	8 7 [✓ 1]	Seven	6 3 [✓ 7]

LEVEL B

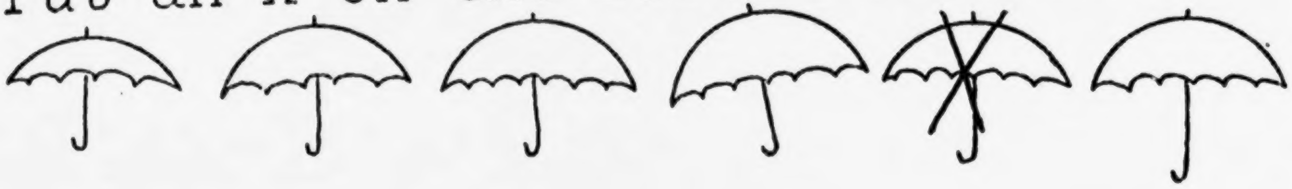
NUMERATION

Skill 12

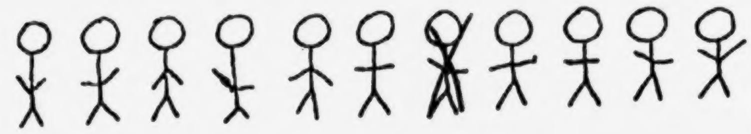
Name ____________________

Date ____________________

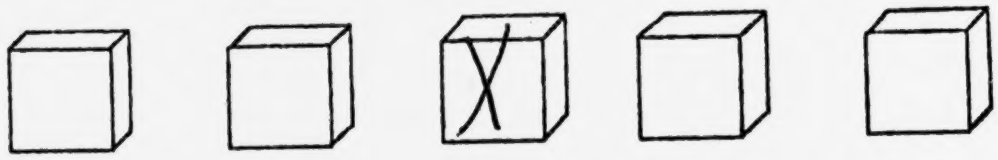
1. Put an X on the fifth umbrella.



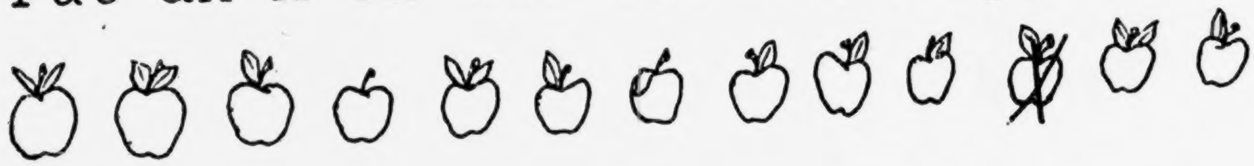
2. Put an X on the seventh boy.



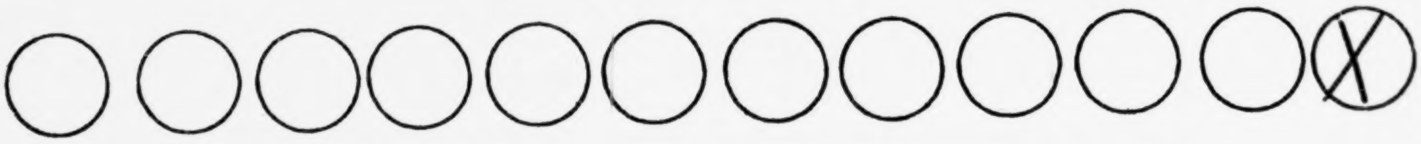
3. Put an X on the third box.



4. Put an X on the eleventh apple.



5. Put an X on the twelfth circle.



LEVEL B

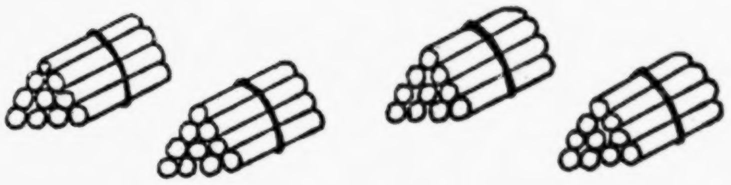
NUMERATION

Skill 13

Name ______________________

Date ______________________

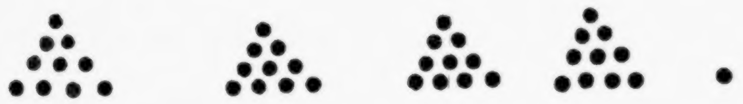
1. Write the number of tens and ones in these pictures.



1. ___4___ tens

___0___ ones

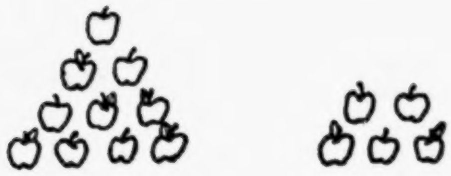
2.



2. ___4___ tens

___1___ ones

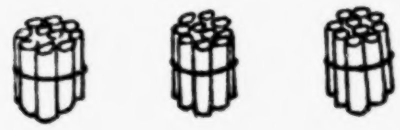
3.



3. ___1___ tens

___5___ ones

4.



4. ___3___ tens

___0___ ones

LEVEL B

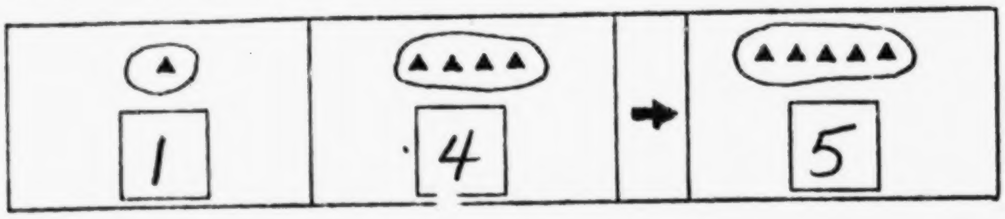
ADDITION AND SUBTRACTION

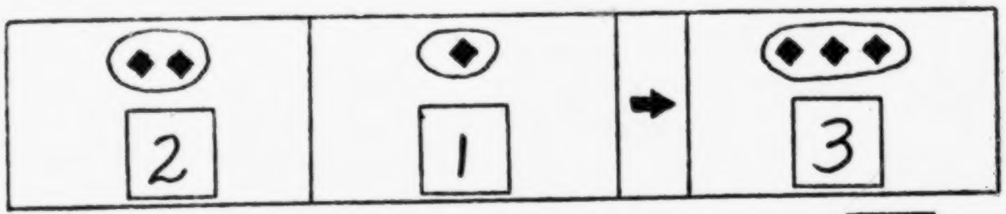
Skill 1, 2

Name ______________________

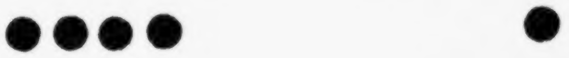
Date ______________________

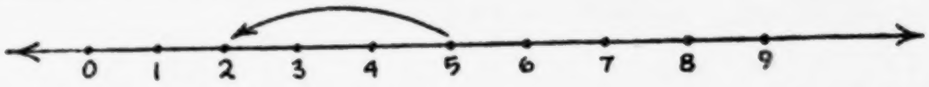
Write the numeral in each ☐.

1.

$\boxed{1}$ $\boxed{4}$ → $\boxed{5}$

2.

$\boxed{2}$ $\boxed{1}$ → $\boxed{3}$

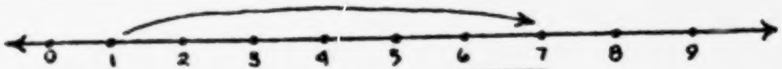
Write the numeral in the ☐.

1.

4 + $\boxed{1}$ 5

2.

0
1
2
3
4
5
6
7
8
9
$\boxed{5}$ - 3 = 2

3.

9 - $\boxed{6}$ = 3

4.

0
1
2
3
4
5
6
7
8
9
1 + $\boxed{6}$ = 7

LEVEL B

ADDITION AND SUBTRACTION

Skill 3 (Page 1 of 5 pages)

Timed: 5 minutes

Name ______________________________

Date ______________________________

ADD.

$\begin{array}{r} 7 \\ +1 \\ \hline 8 \end{array}$	$\begin{array}{r} 2 \\ +9 \\ \hline 11 \end{array}$	$\begin{array}{r} 2 \\ +5 \\ \hline 7 \end{array}$	$\begin{array}{r} 2 \\ +8 \\ \hline 10 \end{array}$	$\begin{array}{r} 4 \\ +4 \\ \hline 8 \end{array}$	$\begin{array}{r} 4 \\ +1 \\ \hline 5 \end{array}$
$\begin{array}{r} 3 \\ +1 \\ \hline 4 \end{array}$	$\begin{array}{r} 1 \\ +8 \\ \hline 9 \end{array}$	$\begin{array}{r} 6 \\ +1 \\ \hline 7 \end{array}$	$\begin{array}{r} 5 \\ +4 \\ \hline 9 \end{array}$	$\begin{array}{r} 3 \\ +3 \\ \hline 6 \end{array}$	$\begin{array}{r} 1 \\ +1 \\ \hline 2 \end{array}$
$\begin{array}{r} 9 \\ +2 \\ \hline 11 \end{array}$	$\begin{array}{r} 1 \\ +3 \\ \hline 4 \end{array}$	$\begin{array}{r} 1 \\ +6 \\ \hline 7 \end{array}$	$\begin{array}{r} 1 \\ +7 \\ \hline 8 \end{array}$	$\begin{array}{r} 2 \\ +1 \\ \hline 3 \end{array}$	$\begin{array}{r} 5 \\ +5 \\ \hline 10 \end{array}$
$\begin{array}{r} 2 \\ +2 \\ \hline 4 \end{array}$	$\begin{array}{r} 7 \\ +2 \\ \hline 9 \end{array}$	$\begin{array}{r} 1 \\ +9 \\ \hline 10 \end{array}$	$\begin{array}{r} 8 \\ +1 \\ \hline 9 \end{array}$	$\begin{array}{r} 6 \\ +2 \\ \hline 8 \end{array}$	$\begin{array}{r} 3 \\ +6 \\ \hline 9 \end{array}$
$\begin{array}{r} 2 \\ +4 \\ \hline 6 \end{array}$	$\begin{array}{r} 4 \\ +5 \\ \hline 9 \end{array}$	$\begin{array}{r} 8 \\ +3 \\ \hline 11 \end{array}$	$\begin{array}{r} 8 \\ +2 \\ \hline 10 \end{array}$	$\begin{array}{r} 6 \\ +4 \\ \hline 10 \end{array}$	$\begin{array}{r} 1 \\ +4 \\ \hline 5 \end{array}$

LEVEL B

Name ______________________

ADDITION AND SUBTRACTION

Date ______________________

Skill 3 (Page 2 of 5 pages)

Timed: 5 minutes

ADD.

$\begin{array}{r}9\\+1\\\hline 10\end{array}$	$\begin{array}{r}6\\+6\\\hline 12\end{array}$	$\begin{array}{r}3\\+2\\\hline 5\end{array}$	$\begin{array}{r}4\\+3\\\hline 7\end{array}$	$\begin{array}{r}1\\+5\\\hline 6\end{array}$	$\begin{array}{r}2\\+3\\\hline 5\end{array}$
$\begin{array}{r}3\\+5\\\hline 8\end{array}$	$\begin{array}{r}6\\+3\\\hline 9\end{array}$	$\begin{array}{r}7\\+3\\\hline 10\end{array}$	$\begin{array}{r}2\\+7\\\hline 9\end{array}$	$\begin{array}{r}8\\+4\\\hline 12\end{array}$	$\begin{array}{r}5\\+6\\\hline 11\end{array}$
$\begin{array}{r}5\\+2\\\hline 7\end{array}$	$\begin{array}{r}4\\+2\\\hline 6\end{array}$	$\begin{array}{r}1\\+2\\\hline 3\end{array}$	$\begin{array}{r}5\\+3\\\hline 8\end{array}$	$\begin{array}{r}5\\+1\\\hline 6\end{array}$	$\begin{array}{r}5\\+7\\\hline 12\end{array}$
$\begin{array}{r}4\\+7\\\hline 11\end{array}$	$\begin{array}{r}6\\+5\\\hline 11\end{array}$	$\begin{array}{r}4\\+6\\\hline 10\end{array}$	$\begin{array}{r}7\\+4\\\hline 11\end{array}$	$\begin{array}{r}3\\+7\\\hline 10\end{array}$	$\begin{array}{r}3\\+9\\\hline 12\end{array}$
$\begin{array}{r}3\\+8\\\hline 11\end{array}$	$\begin{array}{r}7\\+5\\\hline 12\end{array}$	$\begin{array}{r}2\\+6\\\hline 8\end{array}$	$\begin{array}{r}9\\+3\\\hline 12\end{array}$	$\begin{array}{r}4\\+8\\\hline 12\end{array}$	$\begin{array}{r}3\\+4\\\hline 7\end{array}$

LEVEL B

ADDITION AND SUBTRACTION

Skill 3 (Page 3 of 5 pages)

Timed: 5 minutes

Name ______________________

Date ______________________

Subtract.

$\begin{array}{r} 8 \\ -1 \\ \hline 7 \end{array}$	$\begin{array}{r} 11 \\ -2 \\ \hline 9 \end{array}$	$\begin{array}{r} 7 \\ -2 \\ \hline 5 \end{array}$	$\begin{array}{r} 10 \\ -2 \\ \hline 8 \end{array}$	$\begin{array}{r} 8 \\ -4 \\ \hline 4 \end{array}$	$\begin{array}{r} 5 \\ -1 \\ \hline 4 \end{array}$
$\begin{array}{r} 4 \\ -1 \\ \hline 3 \end{array}$	$\begin{array}{r} 9 \\ -1 \\ \hline 8 \end{array}$	$\begin{array}{r} 7 \\ -1 \\ \hline 6 \end{array}$	$\begin{array}{r} 9 \\ -4 \\ \hline 5 \end{array}$	$\begin{array}{r} 6 \\ -3 \\ \hline 3 \end{array}$	$\begin{array}{r} 2 \\ -1 \\ \hline 1 \end{array}$
$\begin{array}{r} 11 \\ -9 \\ \hline 2 \end{array}$	$\begin{array}{r} 4 \\ -3 \\ \hline 1 \end{array}$	$\begin{array}{r} 7 \\ -6 \\ \hline 1 \end{array}$	$\begin{array}{r} 8 \\ -7 \\ \hline 1 \end{array}$	$\begin{array}{r} 3 \\ -1 \\ \hline 2 \end{array}$	$\begin{array}{r} 10 \\ -5 \\ \hline 5 \end{array}$
$\begin{array}{r} 4 \\ -2 \\ \hline 2 \end{array}$	$\begin{array}{r} 9 \\ -7 \\ \hline 2 \end{array}$	$\begin{array}{r} 10 \\ -1 \\ \hline 9 \end{array}$	$\begin{array}{r} 9 \\ -8 \\ \hline 1 \end{array}$	$\begin{array}{r} 8 \\ -2 \\ \hline 6 \end{array}$	$\begin{array}{r} 9 \\ -3 \\ \hline 6 \end{array}$
$\begin{array}{r} 6 \\ -4 \\ \hline 2 \end{array}$	$\begin{array}{r} 9 \\ -5 \\ \hline 4 \end{array}$	$\begin{array}{r} 11 \\ -3 \\ \hline 8 \end{array}$	$\begin{array}{r} 10 \\ -8 \\ \hline 2 \end{array}$	$\begin{array}{r} 10 \\ -4 \\ \hline 6 \end{array}$	$\begin{array}{r} 5 \\ -4 \\ \hline 1 \end{array}$

LEVEL B

ADDITION AND SUBTRACTION

Skill 3 (Page 4 of 5 pages)

Timed: 5 minutes

Name ______________________

Date ______________________

Subtract.

$\begin{array}{r} 10 \\ -9 \\ \hline 1 \end{array}$	$\begin{array}{r} 12 \\ -6 \\ \hline 6 \end{array}$	$\begin{array}{r} 5 \\ -2 \\ \hline 3 \end{array}$	$\begin{array}{r} 7 \\ -3 \\ \hline 4 \end{array}$	$\begin{array}{r} 6 \\ -1 \\ \hline 5 \end{array}$	$\begin{array}{r} 5 \\ -3 \\ \hline 2 \end{array}$
$\begin{array}{r} 8 \\ -3 \\ \hline 5 \end{array}$	$\begin{array}{r} 9 \\ -6 \\ \hline 3 \end{array}$	$\begin{array}{r} 10 \\ -3 \\ \hline 7 \end{array}$	$\begin{array}{r} 9 \\ -2 \\ \hline 7 \end{array}$	$\begin{array}{r} 12 \\ -4 \\ \hline 8 \end{array}$	$\begin{array}{r} 11 \\ -5 \\ \hline 6 \end{array}$
$\begin{array}{r} 7 \\ -5 \\ \hline 2 \end{array}$	$\begin{array}{r} 6 \\ -2 \\ \hline 4 \end{array}$	$\begin{array}{r} 3 \\ -2 \\ \hline 1 \end{array}$	$\begin{array}{r} 8 \\ -5 \\ \hline 3 \end{array}$	$\begin{array}{r} 6 \\ -5 \\ \hline 1 \end{array}$	$\begin{array}{r} 12 \\ -5 \\ \hline 7 \end{array}$
$\begin{array}{r} 11 \\ -4 \\ \hline 7 \end{array}$	$\begin{array}{r} 11 \\ -6 \\ \hline 5 \end{array}$	$\begin{array}{r} 10 \\ -6 \\ \hline 4 \end{array}$	$\begin{array}{r} 11 \\ -7 \\ \hline 4 \end{array}$	$\begin{array}{r} 10 \\ -7 \\ \hline 3 \end{array}$	$\begin{array}{r} 12 \\ -3 \\ \hline 9 \end{array}$
$\begin{array}{r} 11 \\ -8 \\ \hline 3 \end{array}$	$\begin{array}{r} 12 \\ -7 \\ \hline 5 \end{array}$	$\begin{array}{r} 8 \\ -6 \\ \hline 2 \end{array}$	$\begin{array}{r} 12 \\ -9 \\ \hline 3 \end{array}$	$\begin{array}{r} 12 \\ -8 \\ \hline 4 \end{array}$	$\begin{array}{r} 7 \\ -4 \\ \hline 3 \end{array}$

LEVEL B

ADDITION AND SUBTRACTION

Skill 3 (5 of 5 pages)

Name ____________________

Date ____________________

Find the sum or difference.

8	6	7	2	10
- 5	+ 4	- 0	+ 7	- 4
3	10	7	9	6

8 + 7 = 15

9 - 2 = 7

4 + 3 = 7

10 - 1 = 9

11 + 5 = 16

LEVEL B

ADDITION AND SUBTRACTION

Skill 4, 5

Name ______________________

Date ______________________

Write the numeral in each □.

$2 + \boxed{4} = 6$

$4 + 2 = \boxed{6}$

$\boxed{6} + 2 = 8$

$6 + \boxed{2} = 8$

$5 + \boxed{4} = 9$

$\boxed{4} + 5 = 9$

$7 + 3 = \boxed{10}$

$3 + \boxed{7} = 10$

$0 + \boxed{12} = 12$

$\boxed{12} + 0 = 12$

$4 + \boxed{3} = 7$

$\boxed{4} + 3 = 7$

$5 + \boxed{2} = 7$

$\boxed{5} + 2 = 7$

$1 + 6 = \boxed{7}$

$6 + \boxed{1} = 7$

$\boxed{7} - 3 = 4$

$7 - 4 = \boxed{3}$

LEVEL B

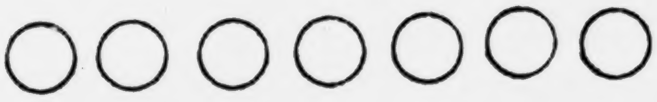
ADDITION AND SUBTRACTION

Skill 6

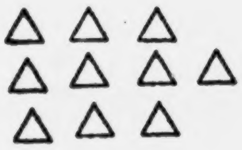
Name ______________________

Date ______________________

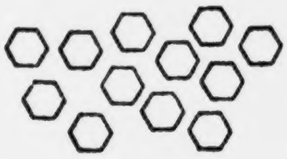
Circle all numbers which are names for how many are in the sets.

1. 

[✓ 10-3]   6   [✓ 4+3]

2. 

11   [✓ 6+4]   [✓ 12-2]

3. 

12-6   [✓ 2+10]   10

4. 8

[✓ 7+1]   8-1   2+5   5-3

6+1   [✓ 8]   2+4

[✓ 6+2]   8-0   [✓ 2+6]   4+3

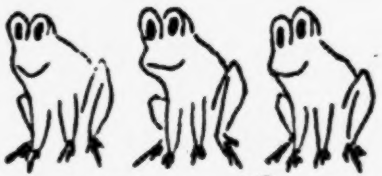
LEVEL B

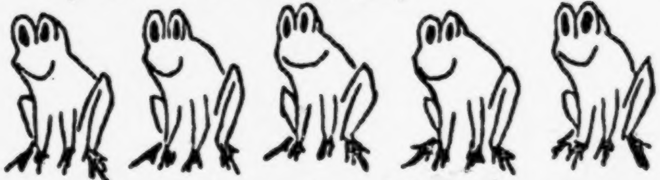
ADDITION AND SUBTRACTION

Skill 7

Name ____________________

Date ____________________

1. Dick has 3 

Sam has 5 

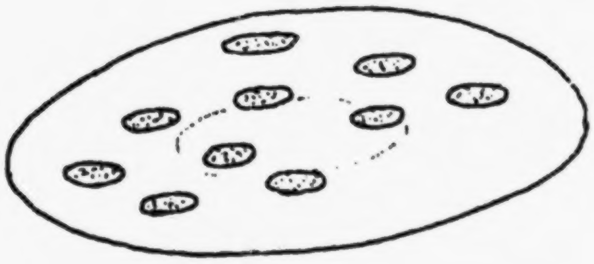
How many frogs do both boys have together? ___8___

---

2. There were 10 cookies on the plate.

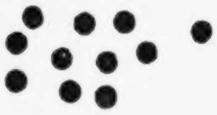
Jim ate 4 of them.

How many were left? ___6___



---

3. Joe had 12 marbles in his pocket.

He lost 5. 

How many were left? ___7___

LEVEL B   Name ______________________

ADDITION AND SUBTRACTION   Date ______________________

Skill 8, 9

1. Ring the addends.

⑤+④= 9   9-5 = 4   8 =⑥+②

---

2. Draw a line under the sums.

$3 + 2 = \underline{5}$ $\underline{6} = 4 + 2$ $7 - 5 = 2$

---

3. Write the correct sign =, > or < in each ○.

4 ⧀ 5 + 1   5 - 1 ⧁ 5-4

4 + 0 ⊜ 3 + 1   2 + 1 ⊜ 3

LEVEL B

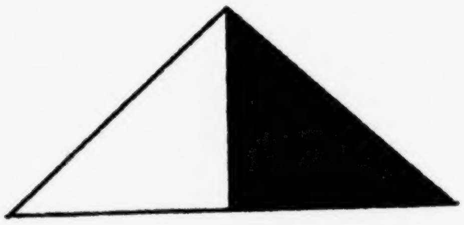
FRACTIONS

Skill 1, 2

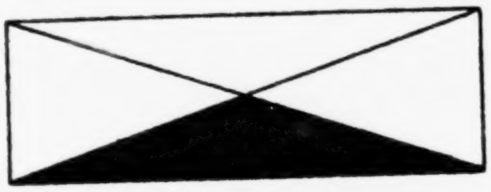
Name ______________________________

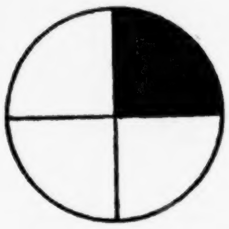
Date ______________________________

Shade one-half of each region.

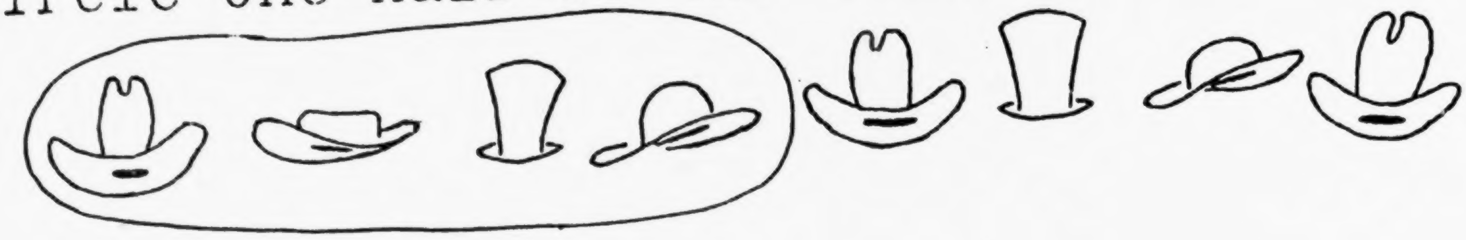


Shade one-fourth of each region.

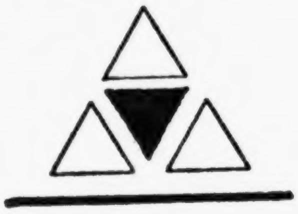


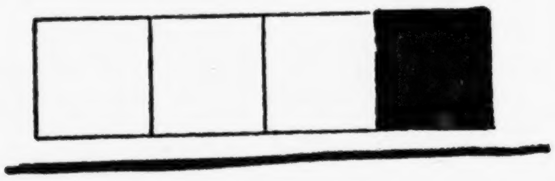


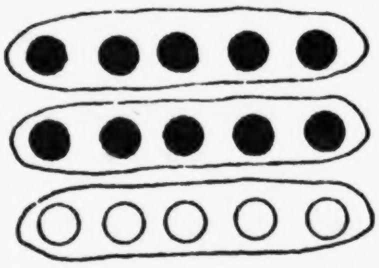
Circle one-half of the hats.

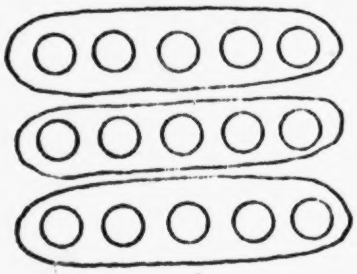


Draw a line under the pictures that show one-fourth.









LEVEL B

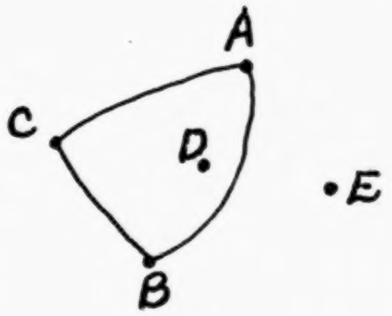
NON-METRIC GEOMETRY

Skill 1, 3

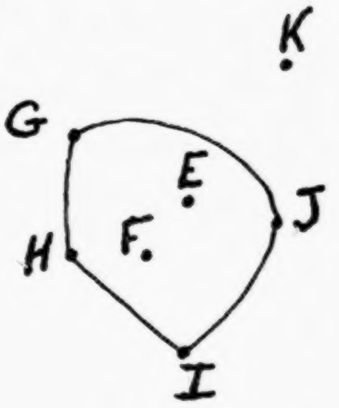
Name ______________________________

Date ______________________________

1. Draw closed curves with the points on, inside, and outside.



On - A,B,C
Inside - D
Outside - E

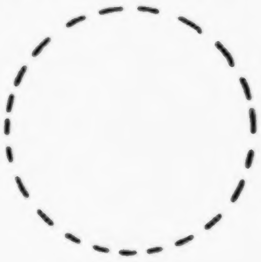


On - G,H,I,J
Inside - E,F
Outside - K

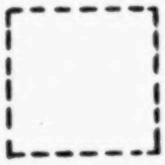
---

2. Complete each curve in blue.

Color the inside of the circle red.



Color the inside of the square yellow.



LEVEL B

NON-METRIC GEOMETRY

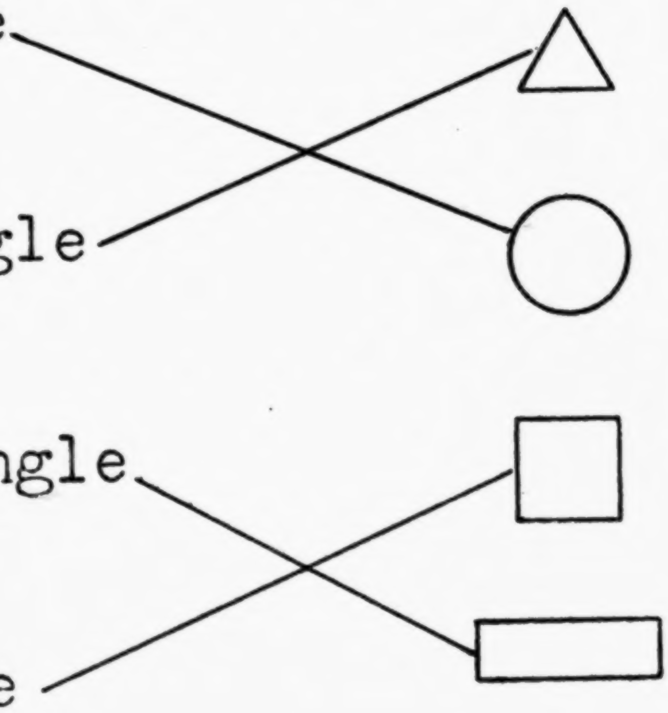
Skill 2

Name ____________________

Date ____________________

Match the word with the figure.

1. circle
2. triangle
3. rectangle
4. square



Just for fun.

Color the triangle	green
Color the circle	yellow
Color the square	red
Color the rectangle	blue

LEVEL B

METRIC GEOMETRY

Skill 1

Name

Date

Measure each line segment.

Write the numeral in each ☐ .

A. 3

B. 1

A. 4

B. 2

A. 4

B. 3

LEVEL B

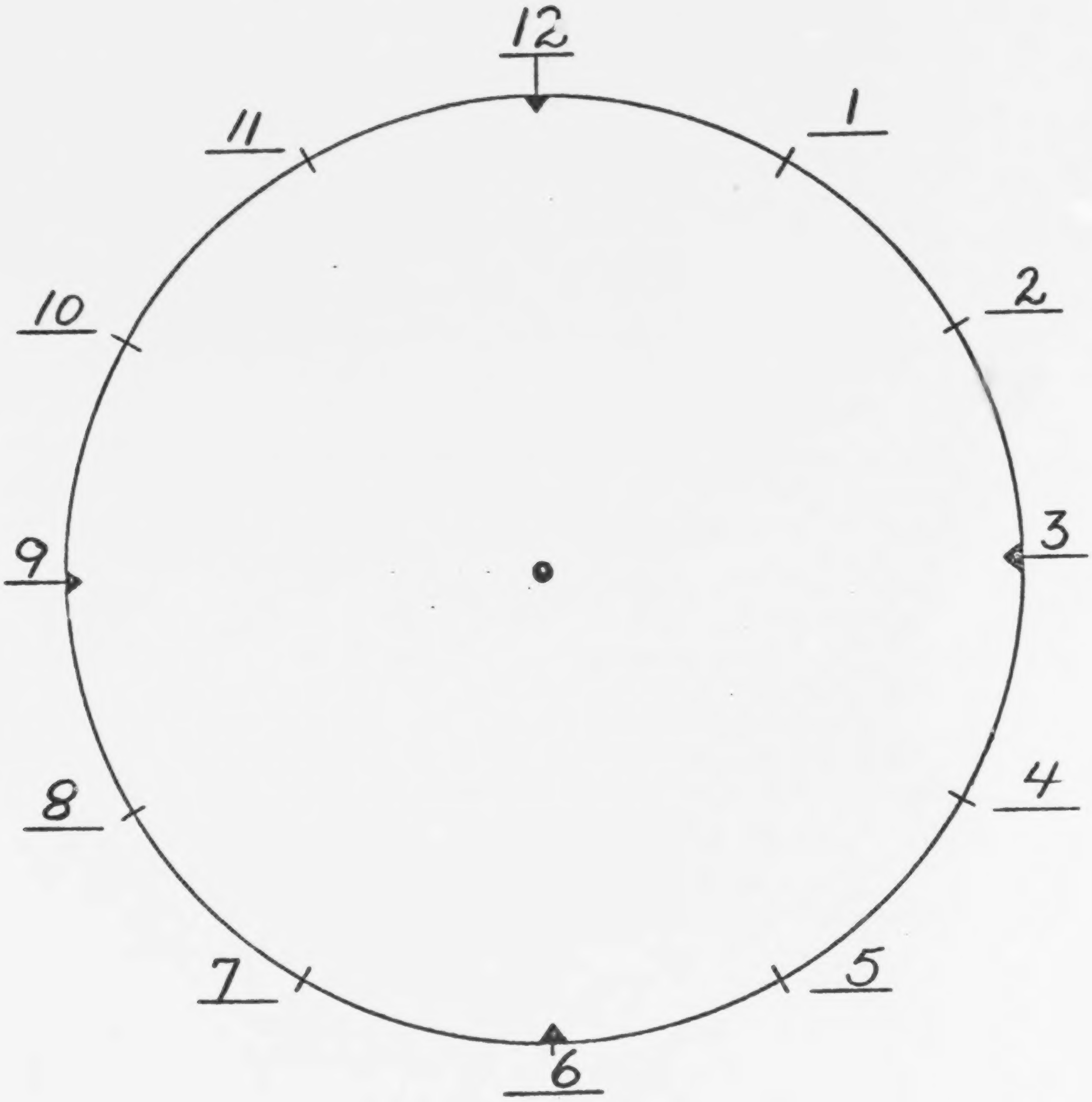
TIME

Skill 1

Name ______________________

Date ______________________

Write all the numerals on this clockface.


12
1
2
3
4
5
6
7
8
9
10
11

LEVEL B

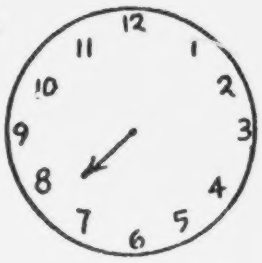
TIME

Skill 2

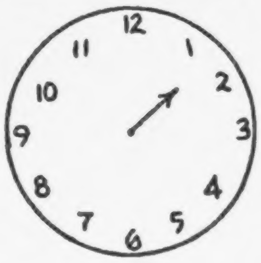
Name ______________________

Date ______________________

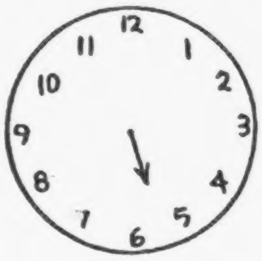
1. This clockface shows that it is past ___7___ o'clock and before ___8___ o'clock.



2. This clockface shows that it is past ___1___ o'clock and before ___2___ o'clock.



3. This clockface shows that it is past ___5___ o'clock and before ___6___ o'clock.



LEVEL B

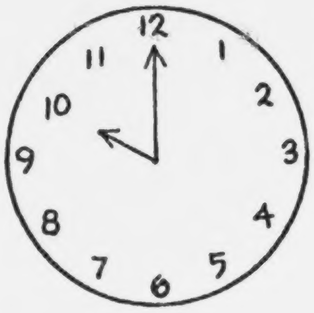
TIME

Skill 3, 4

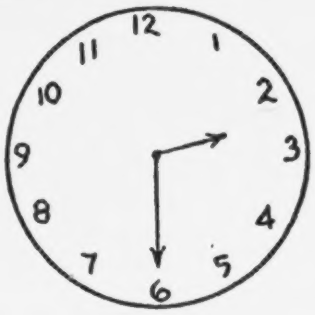
Name ______________________

Date ______________________

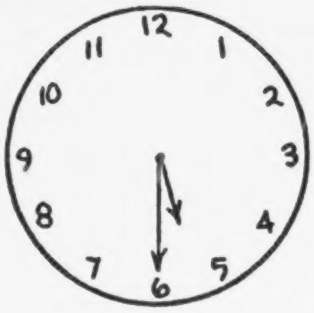
1. This clockface shows that it is 10 o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

2. This clockface shows that it is half past 2 o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

3. This clockface shows that it is half past 5 o'clock.


12
1
2
3
4
5
6
7
8
9
10
11

LEVEL B

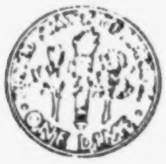
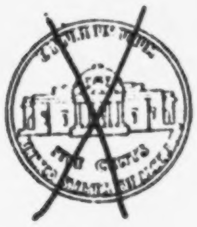
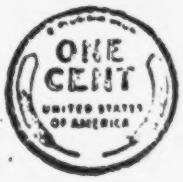
MONEY

Skill 1

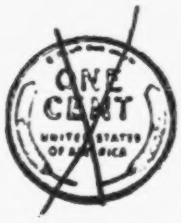
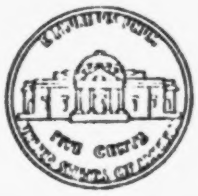
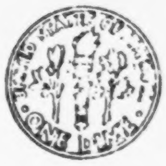
Name ______________________________

Date ______________________________

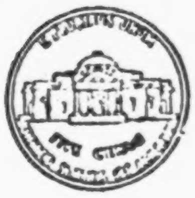
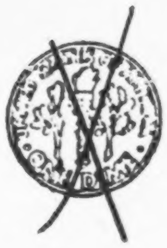
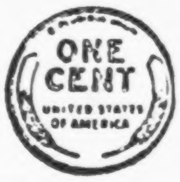
1. Put an X on the picture of a nickel.

2. Put an X on the picture of a penny.

3. Put an X on the picture of a dime.

LEVEL B

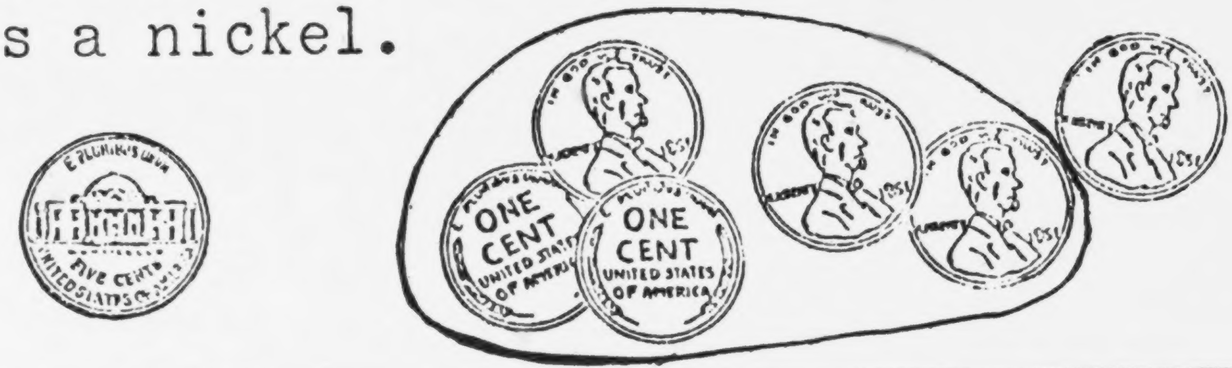
MONEY

Skill 2

Name ______________________________

Date ______________________________

1. Circle the number of pennies that equals a nickel.



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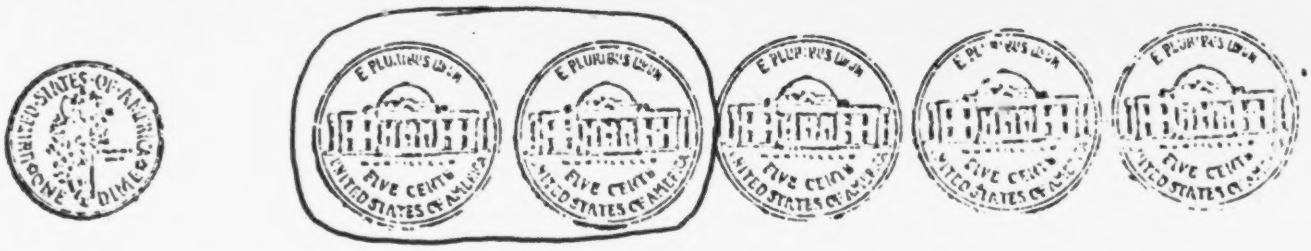
2. Circle the number of nickels that equals a dime.



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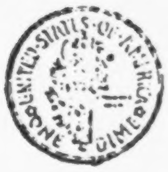
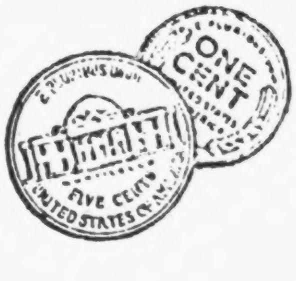
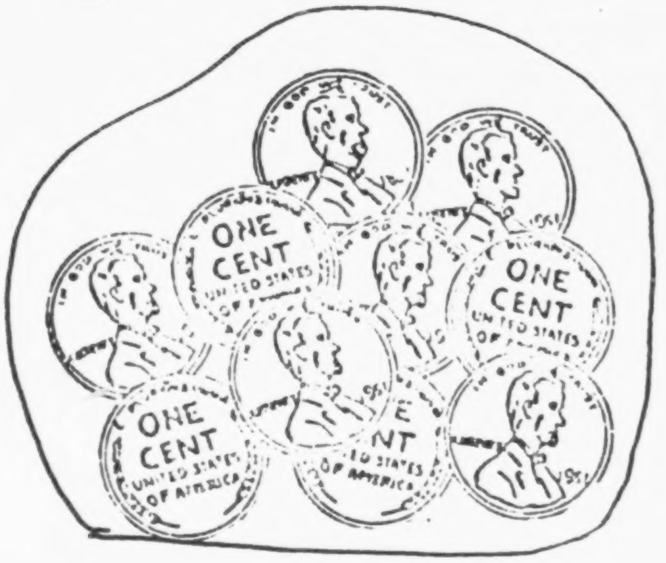
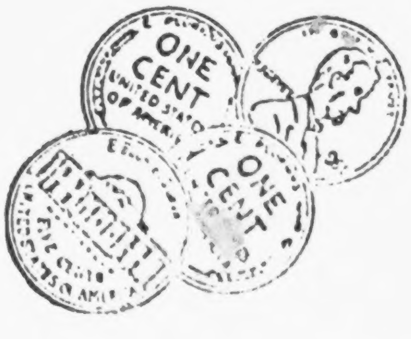
3. Circle the set of coins that equals a dime.









LEVEL B

MONEY

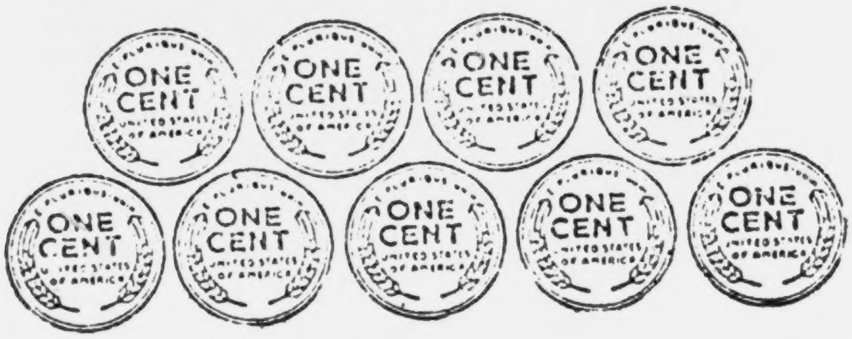
Skill 3

Name ____________________

Date ____________________

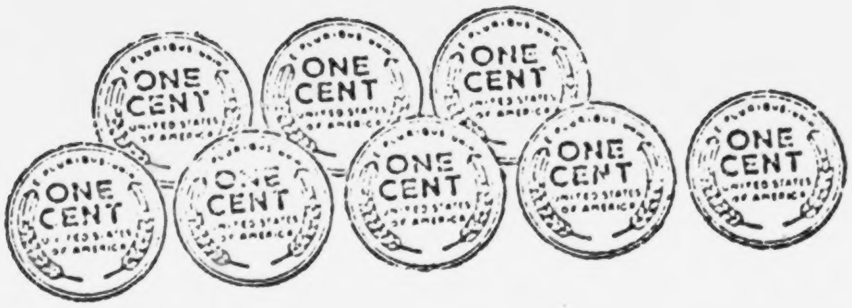
How many cents are there in these sets?

1.



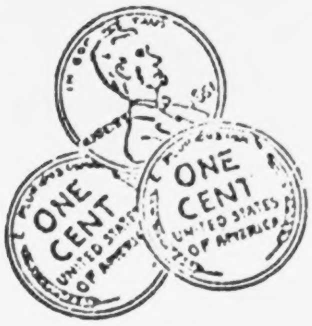
9 ¢

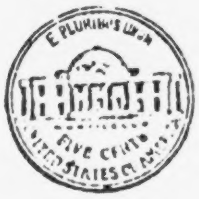
2.



8 ¢

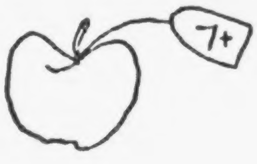
3.

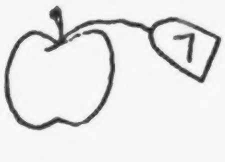


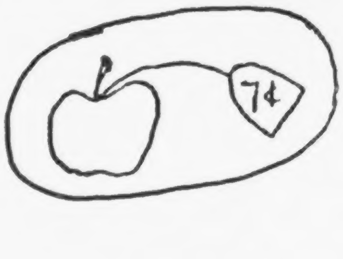

E PLURIBUS UNUM
FIVE CENTS

8 ¢

4. Circle the picture which shows how much the apple costs.







MATHEMATICS CONTINUUM

LEVEL C

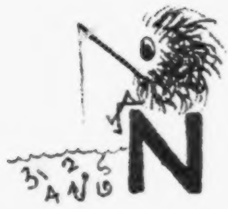
BOOK 2

Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and Continuum mastery tests should be used to provide sufficient evidence to check the 70 - 100% (mastery level) for each skill.

It is suggested that Fractions be taught before Geometry topics are introduced since some activities in the Geometry sections may involve knowledge of fractional parts.

LEVEL C

NUMERATION



Review of Level B Skills

B Numeration 1
B Numeration 2
B Numeration 10
B Numeration 11

	Example Numeration
1. Reads the words for ordinal numbers through twelfth. Responds to oral and written questions regarding these positions in an order.	M A T H Write T in the third ☐. Write A in the second ☐. Write H in the fourth ☐. Write M in the first ☐.
2. Reads and writes numbers to 999 in sequential forward or reverse order from any starting point, or supplies the number which is one more, one less, or in-between two given numbers.	Name the number between these numbers: 31 and 33 32
3. Skip counts by 10's to 200.	Fill in the missing numerals: 80, 90, 100, 110, 120
4. Skip counts by 5's to 200.	Fill in the missing numerals: 25, 30, 35, 40, 45, 50
5. Skip counts by 2's to 200.	Fill in the missing numerals: 148, 150, 152, 154, 156
6. Identifies the digit which is in the units, tens, or hundreds place as requested for numbers to 999. States the place value of a particular digit. Use scrambled order occasionally. Mastery not expected until near end of year. Teacher note: Student should become familiar with the term digit.	What is the place value of the underlined digit in the following numerals? 58 units 136 hundreds

Textual Resources	Related Resources	Notes
Numeration		
Review		
HM Book 2, pp. 1-3		
HM Book 2, p. 4		
HM Book 2, pp. 7-12	HM Visuals 2 (1)	
HM Book 2, pp. 5, 6		
1. HM Book 2, pp. 13, 14		
2. HM Book 2, pp. 99, 100		
3. HM Book 2, In-Depth pp. 263, 264		
4.		
5.		
6.		

LEVEL C

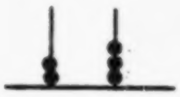
Numeration

7. Writes the cardinal numeral for structured groups up to 999 using expanded notation.

Example

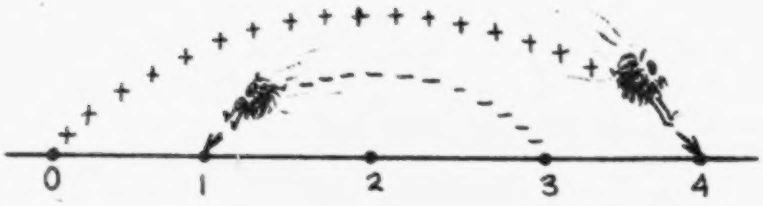
Numeration

What number does the abacus show?



2 tens 3 ones = 23

ADDITION AND SUBTRACTION



Review of Level B Skills

B Add. & Sub. 2

B Add. & Sub. 3

B Add. & Sub. 5

B Add. & Sub. 6

1. Finds the sums and differences for addition and subtraction fact statements. Problems written in both horizontal and vertical form. Timed Mastery Test. Sums to 18.
Teacher note: Reinforce the commutative principle for addition and the inverse operation of addition and subtraction.

Addition and Subtraction

Textual Resources	Related Resources	Notes
Numeration		
7. HM Book Book 2, pp. 93-98, 265,266	HM Visuals 2 (9, 24)	
Addition and Subtraction		
Review	HM Visuals 2 (4, 5, 10)	
HM Book 2, pp. 15-24, 53-56, 109	HM Masters 2 (1, 2, 18)	
HM Book 2, pp. 29, 30, 61, 62, 78	HM Masters 2 (12)	
HM Book 2, pp. 31, 43, 49, 50	HM Masters 2 (3, 10, 11)	
HM Book 2, pp. 25, 26, 39-42, 45-48, 60, 103-106	HM Masters 2 (5-9, 15-17)	
1. HM Book 2, pp. 90, 111, 113, 114, 116, 117, 120, 121, 123, 124, 127, 128, 130, 132, 133, 135, 137, 142	HM Masters 2 (19, 21, 23, 25, 30, 33, 34)	

LEVEL C	Example
Addition and Subtraction	**Addition and Subtraction**
2. Adds three single digit numbers in different ways to illustrate the associative principle for addition. Puts in parentheses to show which numbers are added first. Also uses associative principle to regroup or bridge 10's.	$\begin{array}{rcr} \boxed{1} & & \\ \boxed{1} & \rightarrow & \boxed{2} \\ +3 & \rightarrow & 3 \\ \hline & & \boxed{5} \end{array}$ $9 + 6 = 9 + (1 + 5)$ $= (9 + \boxed{1}) + 5$ $= \boxed{10} + \boxed{5} = \boxed{15}$
3. Fills in the missing digit, operation symbol, or relation symbol to make a number sentence true.	$4 + \boxed{2} = 6$ $5 - 4 ⊜ 1$ $6 ⊕ 2 = 8$ $5 + 1 ⧀ 8$
4. Adds a number less than 10 to a number greater than 10 without renaming.	$34 + 4 = \boxed{38}$ $\begin{array}{r} 25 \\ +\ 4 \\ \hline 29 \end{array}$
5. Does two and three-place addition without any renaming.	$\begin{array}{r} 54 \\ +\ 24 \\ \hline 78 \end{array}$ $\begin{array}{r} 346 \\ +\ 233 \\ \hline 579 \end{array}$
6. Subtracts a number less than 10 from a number greater than 10 without renaming.	$27 - 3 = \boxed{24}$ $\begin{array}{r} 27 \\ -\ 3 \\ \hline 24 \end{array}$
7. Does two and three-place subtraction without any renaming.	$\begin{array}{r} 56 \\ -\ 24 \\ \hline 32 \end{array}$ $\begin{array}{r} 937 \\ -\ 512 \\ \hline 425 \end{array}$
8. Adds a number less than 10 to a number greater than 10 with renaming of ones as tens.	$48 + 5 = \boxed{53}$ $\begin{array}{r} 48 \\ +\ 5 \\ \hline 53 \end{array}$
9. Subtracts numbers less than 10 from numbers greater than 10 with renaming of 1 ten as 10 ones.	$32 - 4 = \boxed{28}$ $\begin{array}{r} 32 \\ -\ 4 \\ \hline 28 \end{array}$

Textual Resources	Related Resources	Notes
Addition and Subtraction		
2. HM Book 2, pp. 33-38, 44, 51, 89, 107, 108, 115, 118, 125, 126, 129, 134, 136, 139, 140	HM Visuals 2 (3, 10) HM Masters 2 (4, 20, 24, 26-29, 31)	
3. HM Book 2, pp. 27, 28, 52, 59, 77, 112, 131, 138, 198	HM Visuals 2 (2)	
4. HM Book 2, pp. 143-146	HM Visuals 2 (11) HM Masters 2 (35)	
5. HM Book 2, pp. 153, 154, 157-168, 177, 267, 268, 271, 272	HM Visuals 2 (13) HM Masters 2 (38, 54)	
6. HM Book 2, pp. 147-150	HM Visuals 2 (12) HM Masters 2 (36)	
7. HM Book 2, pp. 155, 169-176, 269, 270, 273, 274	HM Visuals 2 (14) HM Masters 2 (39, 55)	
8. HM Book 2, pp. 178-182, 201	HM Visuals 2 (17) HM Masters 2 (40)	
9. HM Book 2, pp. 249-252	HM Masters 2 (48)	

LEVEL C

Addition and Subtraction

10. Identifies number patterns in addition and subtraction.

11. Does two-place addition with renaming of ones as tens. No mastery test until Level D.

12. Does two-place subtraction with renaming of 1 ten as 10 ones. No mastery test until Level D.

13. Mixed Practice.

14. In-Depth.

Example

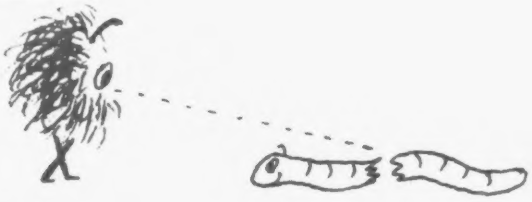
Addition and Subtraction

+	2	5	6	7	4	8
4	6	9	10	11	8	12
3	5	8	9	10	7	11

$$\begin{array}{r} 37 \\ +57 \\ \hline 94 \end{array}$$

$$\begin{array}{r} 53 \\ -\ 28 \\ \hline 25 \end{array}$$

MULTIPLICATION



1. In-Depth.

Multiplication

Textual Resources	Related Resources	Notes
Addition and Subtraction		
10. HM Book 2, pp. 57, 58, 64, 110, 141, 213-216, 233, 234, 292	HM Masters 2 (32, 45)	
11. HM Book 2, pp. 202-210	HM Visuals 2 (17) HM Masters 2 (41-44)	
12. HM Book 2, pp. 253-260, 262	HM Visuals 2 (33) HM Masters 2 (49-53)	
13. HM Book 2, pp. 32, 101, 102, 119, 151, 152, 156, 183, 184, 197, 199, 200, 261, 275, 276, 279	HM Masters 2 (22, 37)	
14. HM Book 2, pp. 63, 122, 280		

Multiplication		
1. HM Book 2, pp. 281-291, 293-318	HM Visuals 2 (25-28) HM Masters 2 (56-60)	

LEVEL C

	FRACTIONS	Example Fractions
1.	Divides a set of identical objects into parts for the fractions 1/2, 1/3, 1/4. States that these terms mean "one of ___ equal parts."	"Ring 1/3 of the objects in each set." "One-third means one of ____ equal parts."
2.	Divides an object into halves, thirds, or fourths and/or responds to directions to shade a portion of the region of an object. Describes a fractional part as "one of ____ equal parts."	"Color one-fourth of each region."
*3.	Rejects figures which are divided into 2, 3, or 4 parts which are clearly unequal.	"Mark the figures which are not clearly equal."
4.	Writes "1/2, 1/3, 1/4," as names for fractional numbers and responds to the terms 1/2 (one-half), 1/3 (one-third), 1/4 (one-fourth) when used in directions.	"Write '1/2' under the regions that are half shaded."
5.	Identifies (orally and in writing) 3/4 (three-fourths), and 2/3 (two-thirds) of an object or set of objects. Responds to these terms when used in directions.	"Color 3/4 of the objects in each set." "Write '3/4' under the regions that are three-fourths colored."

Textual Resources	Related Resources	Notes
Fractions		
1. HM Book 2, pp. 79, 80, 231, 232, 237, 238	HM Visuals 2 (20)	
2. HM Book 2, pp. 229, 235	HM Visuals 2 (19)	
3. HM Book 2, pp. 230, 236	HM Visuals 2 (19)	
4. HM Book 2, pp. 230, 236	HM Visuals 2 (19)	
5. HM Book 2, pp. 239, 240, 243-246	HM Visuals 2 (19, 20-22) HM Masters 2 (46, 47)	

LEVEL C

NON-METRIC GEOMETRY

Review of Level B Skills

B Non-Metric Geometry 1
B Non-Metric Geometry 3

1. Identifies and joins points in a line by letters and names line segments by their lettered points. Reads "$\overline{AB}$" as "line segment AB".

2. Identifies simple and not simple curves - both closed and open.

3. Identifies number of sides and corners (vertices) in a triangle, rectangle and a square.

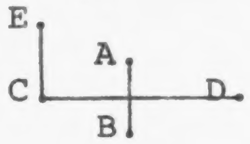
4. In-Depth.

Example

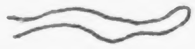
Non-Metric Geometry

Draw the line segments.

$\overline{AB}$ $\overline{CD}$ $\overline{EC}$



Write yes or no.



Is the curve simple? yes
Is the curve closed? no

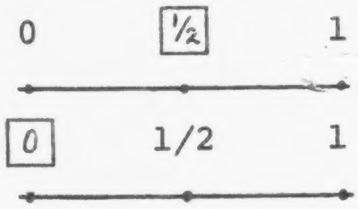
How many sides does the curve have? 4

METRIC GEOMETRY

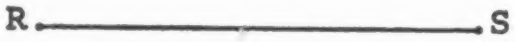
1. Compares line segments with a given unit of length and a given half unit of length. Teacher note: Review Level C Non-Metric Geometry Skill 1 if necessary.

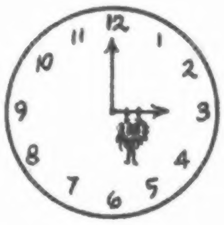
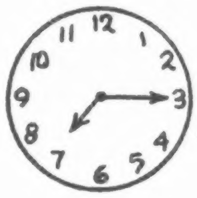
Metric Geometry

Write 0, 1/2, or 1 in each ☐.

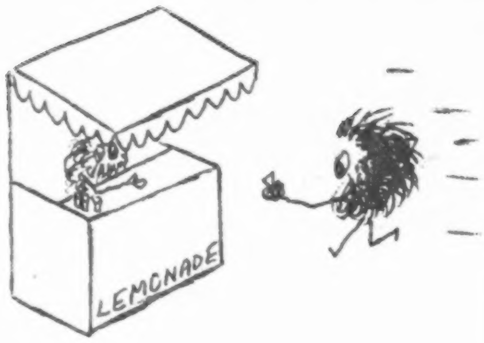


Textual Resources	Related Resources	Notes
Non-Metric Geometry		
Review		
HM Book 2, pp. 226, 227 HM Book 2, pp. 225, 228	HM Visuals 2 (18)	
1. HM Book 2, pp. 65-68	HM Visuals 2 (6)	
2. HM Book 2, pp. 217-220		
3. HM Book 2, pp. 221-223		
4. HM Book 2, p. 224		
Metric Geometry		
1. HM Book 2, pp. 69, 70, 81-83	HM Visuals 2 (8)	

LEVEL C	Example
Metric Geometry	Metric Geometry
2. Uses inches and half-inches as a standard unit of measurement.	 The length of $\overline{RS}$ is 2 inches. m ($\overline{RS}$) = 2
3. Utilizes the information that there are 12 inches in a foot (foot ruler) to solve measurement problems.	1 foot = 12 inches 24 inches = 2 feet
4. States and shows relationships between cups, pints, quarts, half-gallons and gallons.	To make 1 quart we need 2 pints or 4 cups.

TIME	Time
	
1. Tells time in whole, half, and quarter hour intervals.	"What time does the clock show?" quarter past 7 
2. Reads time by five minute intervals. No mastery test until Level D.	

Textual Resources	Related Resources	Notes
Metric Geometry		
2. HM Book 2, pp. 71-74, 84	HM Visuals 2 (7, 8)	
3. HM Book 2, pp. 75, 76 teacher's page 105		
4. HM Book 2, pp. 87, 88, 241	HM Masters 2 (14)	
Time		
1. HM Book 2, pp. 85, 86, 242	Commercial Teach-A-Time Clock Clock dial, large Student Practice Clock HM Masters 2 (13)	



LEVEL C MONEY	Example Money
1. Matches pennies, nickels, dimes, quarters, and half-dollars with their numerical values or with values in other coins.	"How many pennies are in one dime? How many nickels are in a quarter?"
2. Finds the value of small collections of coins. Chooses or lists a set of coins that total a given value.	"Find the value of this collection of coins."
3. Compares sets of coins to identify the greater value.	"Mark the set of coins that has the greater value."
*4. Identifies proper change after making a purchase.	
*5. Solves one-step verbal problems involving adding and subtracting values of money.	

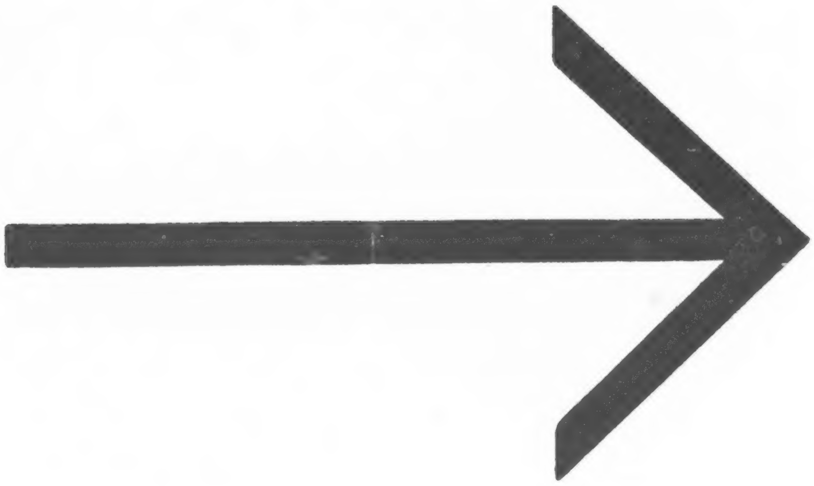
Textual Resources	Related Resources	Notes
Money		
1. HM Book 2, pp. 185, 186, 189, 191	HM Visuals 2 (15)	
2. HM Book 2, pp. 187, 188, 190,192, 196, 211, 277 In-Depth p. 212	HM Visuals 2 (15, 16)	
3. HM Book 2, pp. 193,194	HM Visuals 2 (15)	
4. HM Book 2, p. 195	HM Visuals 2 (16)	
5. HM Book 2, pp. 278 teacher's page 229		

LEVEL C

TESTS

and

ANSWER KEYS



LEVEL C

NUMERATION

Skill 1

Name ______________________________

Date ______________________________

☐ ☐ ☐ ☐ ☐ ☐ ☐

Write M in the third ☐ .

Write L in the seventh ☐ .

Write E in the fourth ☐ .

Write N in the first ☐ .

Write A in the sixth ☐ .

Write U in the second ☐ .

Write R in the fifth ☐ .

LEVEL C

NUMERATION

Skill 2, 3

Name ______________________

Date ______________________

Fill in the missing numerals.

1) 200, _____, _____, 197, 196, _____

2) 76, _____, _____, 79, 80, _____

3) _____, 55, 56, _____, 58, _____

4) 126, _____, 128, 129, _____, 131

5) 43, _____, 41, 40, _____, _____

6) 57, 47, _____, _____, _____, 7

7) _____, 135, 145, _____, _____, 175

8) 111, 121, _____, _____, 151, _____

9) 178, 168, _____, _____, 138, _____

10) _____, 87, 77, _____, _____, 47

LEVEL C

NUMERATION

Skill 4, 5

Name ______________________________

Date ______________________________

Fill in the missing numeral.

1) 185, _____, 175, _____, _____, _____

2) 171, 176, _____, _____, _____, 196

3) 133, 138, _____, 148, 153, _____

4) 94, _____, 84, 79, _____, _____

5) 62, 67, _____, _____, _____, 87

6) 13, 15, _____, _____, _____, 23

7) 97, 99, _____, _____, 105, 107

8) 51, 53, _____, _____, _____, 61

9) 139, 141, _____, _____, _____, 149

10) 76, 78, _____, _____, 84, _____

LEVEL C

NUMERATION

Skill 6, 7

Name ______________________

Date ______________________

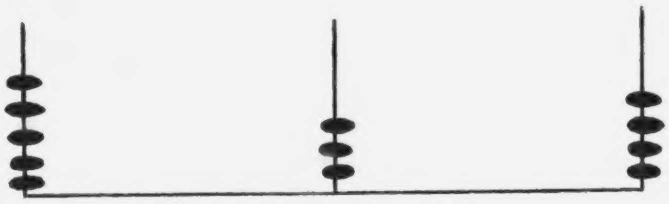
What is the place value of the underlined digit in the following numbers?

1. $\underline{5}8$ ______________________
2. $\underline{1}74$ ______________________
3. $19\underline{0}$ ______________________

1. What digit is in the tens place in this number? 171 ______________

2. What digit is in the hundreds place in this number? 186 ______________

3. What digit is in the ones place in this number? 149 ______________



_____ hundreds _____tens _____ones

168=____+60+8

750=____+____

624=____+____+____

329=____+____+____

LEVEL C

ADDITION AND SUBTRACTION

Skill 1 (Page 1 of 3 pages)

Name ______________________________

Date ______________________________

Name the sum or missing addend.

9 + 6 = ______
11 - 8 = ______
5 + 6 = ______

8 + 7 = ______
14 - 6 = ______
14 - 8 = ______

8 - 4 = ______
7 + 9 = ______
16 - 7 = ______

7	13	17	9	16	12	15
+6	- 8	- 8	+5	- 5	- 6	- 4

8	14	18	9	7	15	16
+8	- 5	- 9	+7	+6	- 6	- 4

10 + 2 = ______
6 + 7 = ______
8 + 7 = ______

2 + 10 = ______
7 + 6 = ______
7 + 8 = ______

18 - 9 = ______
16 - 5 = ______
17 - 4 = ______

9 + 9 = ______
11 + 5 = ______
13 + 4 = ______

LEVEL C

Name ______________________________

ADDITION AND SUBTRACTION

Date ______________________________

Skill 1 (Page 2 of 3 pages)

Timed:10 minutes

Add

2 +5	2 +10	7 +7	3 +2	10 + 1	4 +4	5 +3	4 +3	5 +0	0 +9
1 +2	7 +10	2 +6	3 +6	5 +6	10 + 7	4 +10	9 +7	3 +7	0 +6
3 +8	5 +7	8 +10	7 +1	9 +2	8 +5	10 + 2	8 +8	3 +4	8 +0
7 +8	6 +6	1 +10	4 +5	3 +3	7 +6	9 +3	8 +7	10 + 6	7 +4
0 +0	2 +4	10 + 7	9 +7	5 +8	4 +1	0 +2	4 +10	6 +8	4 +2
1 +5	3 +1	0 +8	7 +3	10 + 3	9 +8	8 +4	2 +7	6 +10	6 +5
8 +3	0 +10	6 +7	6 +9	9 +9	5 +4	8 +9	7 +5	2 +8	10 + 4
6 +2	9 +6	10 + 5	4 +6	6 +3	4 +8	6 +0	3 +9	5 +2	9 +4
5 +5	7 +2	3 +5	9 +5	3 +10	8 +6	0 +5	7 +0	1 +3	10 + 8
0 +4	2 +8	8 +2	4 +9	8 +1	2 +3	7 +9	5 +10	6 +4	0 +1

LEVEL C

ADDITION AND SUBTRACTION

Name ______________________________

Date ______________________________

Skill 1 (Page 3 of 3 pages)

Timed: 10 minutes

Subtract

12 -8	9 -4	6 -3	6 -4	9 -8	13 -7	11 -3	17 -9	15 -10	12 -5
12 -2	14 -5	13 -6	8 -4	17 -8	14 -6	13 -5	10 -6	9 -7	13 -10
10 -9	8 -5	9 -2	7 -0	7 -2	10 -7	16 -6	18 -10	11 -6	9 -5
5 -3	11 -2	13 -4	15 -5	14 -9	10 -8	12 -4	9 -6	7 -5	14 -8
7 -4	9 -0	4 -3	17 -7	15 -9	10 -4	10 -1	5 -8	16 -10	8 -7
5 -5	8 -3	10 -0	11 -7	8 -0	11 -5	6 -6	15 -7	17 -10	15 -6
10 -2	10 -10	3 -3	10 -5	12 -6	16 -9	12 -3	11 -4	14 -10	14 -7
11 -1	10 -3	18 -9	8 -1	12 -7	7 -3	18 -8	1 -0	16 -7	12 -9
6 -0	12 -10	13 -3	11 -9	13 -9	11 -8	13 -8	0 -0	7 -7	11 -10
4 -0	14 -4	5 -0	5 -2	16 -8	8 -6	8 -5	6 -2	8 -8	4 -4

LEVEL C

ADDITION AND SUBTRACTION

Skill 2

Name ______________________

Date ______________________

Solve the equation.
Put parentheses ( ) to show which numbers are added first.

$3 + 2 + 1 = \square$ $\quad$ $6 + 3 + 2 = \square$ $\quad$ $5 + 3 + 2 = \square$

$2 + 2 + 1 = \square$ $\quad$ $4 + 2 + 3 = \square$ $\quad$ $7 + 2 + 4 = \square$

Name the sums.

$$\begin{array}{r}4\\4\\+4\\\hline\end{array}\quad\begin{array}{r}7\\4\\+3\\\hline\end{array}\quad\begin{array}{r}8\\1\\+2\\\hline\end{array}\quad\begin{array}{r}2\\3\\+8\\\hline\end{array}\quad\begin{array}{r}6\\4\\+4\\\hline\end{array}\quad\begin{array}{r}5\\1\\+6\\\hline\end{array}\quad\begin{array}{r}6\\5\\+3\\\hline\end{array}\quad\begin{array}{r}7\\3\\+5\\\hline\end{array}$$

Write the numeral in the $\square$

$$\begin{aligned} 9 + 3 &= 9 + (\square + 2) = (9 + \square) + \square \\ &= \square + \square \\ &= \square \end{aligned}$$

$$\begin{aligned} 4 + 3 + 6 &= (4 + 3) + 6 \\ &= \square + 6 \\ &= \square \end{aligned}$$

$$\begin{array}{rcr} 4 & \longrightarrow & 4 \\ +\boxed{\begin{array}{c}3\\6\end{array}} & \longrightarrow & \square \\ \hline & & \square \end{array}$$

LEVEL C

ADDITION AND SUBTRACTION

Skill 3

Name ______________________

Date ______________________

Complete these number sentences.

4 + □ = 13

9 + 7 = □

□ + 3 = 7

□ - 3 = 5

15 - □ = 6

7 - □ = 3

Write + or - in each ○.

8 ○ 5 = 3

6 ○ 3 = 3

2 ○ 3 = 5

7 ○ 3 = 10

4 ○ 2 = 2

8 ○ 5 = 13

Write >, < or = in each ○.

10 - 3 ○ 6

8 - 3 ○ 3 + 2

6 - 1 ○ 2 + 2

4 + 5 ○ 6 + 2

7 + 3 ○ 5 + 9

8 ○ 10

9 ○ 10

4 - 2 ○ 3

7 ○ 4 + 1

LEVEL C

ADDITION AND SUBTRACTION

Skill 4

Name ______________________

Date ______________________

Name the sums.

42	24	33	64	45	91
+5	+4	+3	+3	+4	+8

Write the numerals in each ☐ .

47 = 40 + ☐ so 47 + 4 = (☐ + ☐) + 4

= ☐ (☐ + 4)

= ☐ + ☐ = ☐

LEVEL C

ADDITION AND SUBTRACTION

Skill 5

Name ______________________

Date ______________________

Name the sums.

55	23	34	30	68	47	30	77
+43	+65	+23	+10	+20	+21	+69	+21

255	475	634	583	723	328	100
+734	+312	+243	+314	+246	+261	+800

LEVEL C Name ______________________________

ADDITION AND SUBTRACTION Date ______________________________

Skill 6

Name the missing addend.

26	58	45	99	18	39	46	79
-3	-5	-4	-2	-6	-7	-5	-6

Write the numeral in each ☐ .

26 - 4 = ☐ 65 - 5 = ☐ 49 - 3 = ☐ 18 - 6 = ☐

LEVEL C Name ______________________________

ADDITION AND SUBTRACTION Date ______________________________

Skill 7

Name the missing addend.

70	67	85	54	96	85	43	78
-30	-24	-42	-33	-45	-35	-32	-46

976	355	856	548	689	454	793	932
-725	-245	-545	-217	-446	-332	-372	-621

LEVEL C

ADDITION AND SUBTRACTION

Name ____________________

Date ____________________

Skill 8

Write the numeral in the ☐.

29 + 1 = ☐ 74 + 7 = ☐ 85 + 8 = ☐

65 + 5 = ☐ 48 + 3 = ☐ 39 + 7 = ☐

78 + 3 = ☐ 59 + 4 = ☐ 63 + 9 = ☐

Name the sums.

15	73	56	28	68	48	36	83
+6	+8	+6	+7	+7	+5	+6	+7

LEVEL C

ADDITION AND SUBTRACTION

Name ____________________

Date ____________________

Skill 9

Write the numeral in the ☐.

80 - 7 = ☐ 56 - 9 = ☐ 32 - 4 = ☐

55 - 6 = ☐ 73 - 7 = ☐ 74 - 5 = ☐

43 - 5 = ☐ 72 - 4 = ☐ 66 - 9 = ☐

Name the missing addends.

31	73	82	64	45	62	76	58
-4	-6	-8	-7	-6	-9	-8	-9

LEVEL C

ADDITION AND SUBTRACTION

Skill 10

Name ____________________

Date ____________________

Complete the number patterns.

+	7	8	11	10	9
7	14				

+	2				
8	10	9	18	14	12

+	5	8	3	9	2
6	11				

+	6				
6	12	9	7	18	15

LEVEL C

ADDITION AND SUBTRACTION

Skill 11

Name ____________________

Date ____________________

Name the sums.

68	59	47	27	39	63	74	55
+15	+27	+36	+25	+42	+28	+17	+36

18	33	25	36	65	77	66	49
+29	+19	+49	+36	+15	+17	+29	+26

LEVEL C

ADDITION AND SUBTRACTION

Skill 12

Name ____________________

Date ____________________

Solve the equations.

80 - 56 = ☐ 71 - 43 = ☐ 45 - 27 = ☐

Name the missing addends.

81	73	91	44	96	55	94	61
-29	-57	-66	-17	-77	-16	-59	-42

LEVEL C

ADDITION AND SUBTRACTION

Skill 13

Name ____________________

Date ____________________

Name the sums and the missing addends.

93	8	59	27	39	46	695	754
-29	+9	-6	+2	-4	+28	-233	-243

618	723	606	74	536	986
+321	-512	+221	-35	+422	-733

LEVEL C

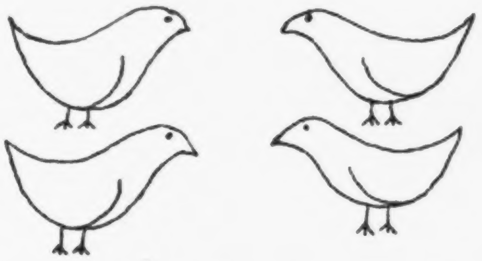
FRACTIONS

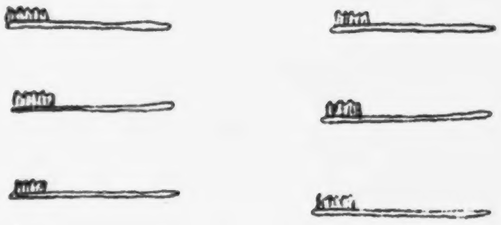
Skill 1, 5

Name ____________________

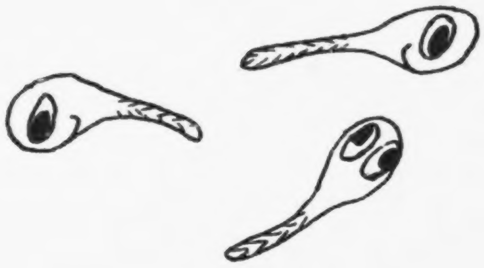
Date ____________________

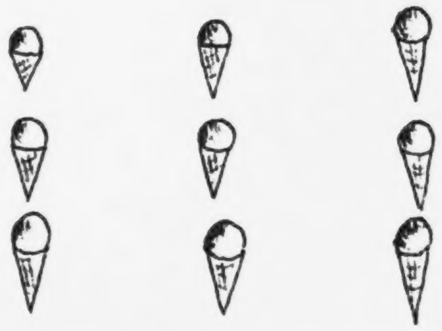
1. Ring $\frac{1}{2}$ of the objects in each set.





2. Ring $\frac{1}{3}$ of the objects in each set.





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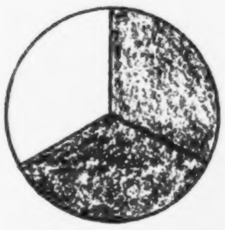
3. Write $\frac{2}{3}$ under the regions that are two thirds colored.



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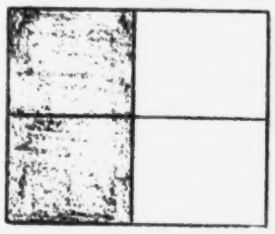

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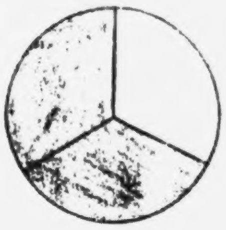

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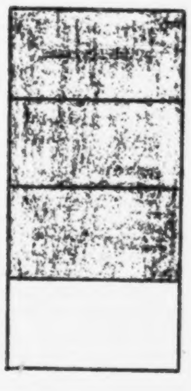
4. Write $\frac{3}{4}$ under the regions that are three fourths colored.



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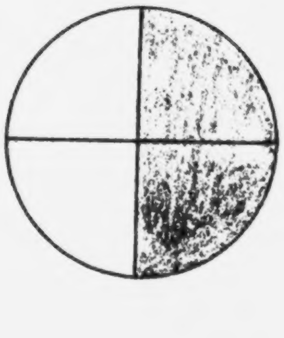

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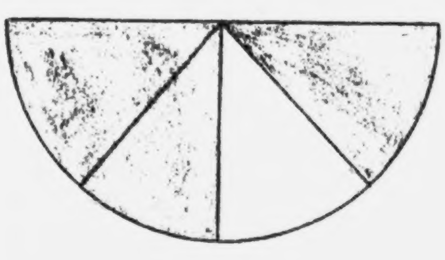

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LEVEL C

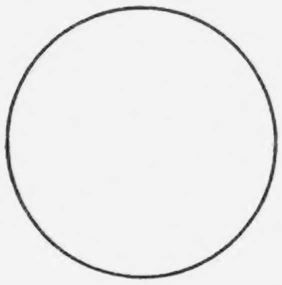
FRACTIONS

Skill 2

Name ______________________________

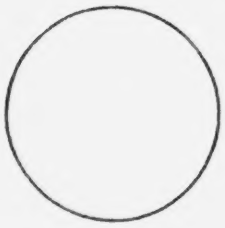
Date ______________________________

1. Divide this circle into fourths.

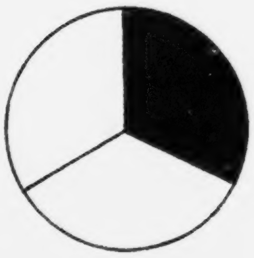


2. Divide this rectangle into thirds.

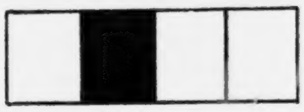
3. Divide this circle into halves.



4. One of ________ equal parts has been shaded.



5. One of ________ equal parts has been shaded.



LEVEL C

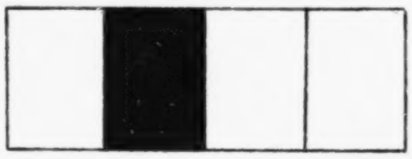
FRACTIONS

Skill 4

Name ______________________________

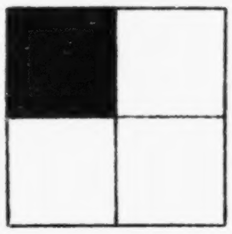
Date ______________________________

1. Draw a ring around the fraction which shows how much of the rectangle is shaded.



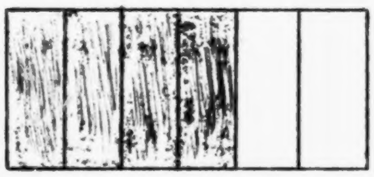
$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

2. What part of the is shaded?

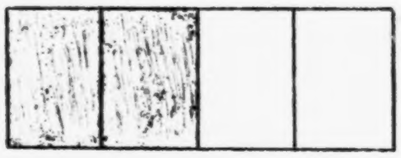


$\frac{1}{3}$ $\frac{1}{4}$ $\frac{1}{2}$

3. Is $\frac{1}{2}$ of this shaded? Yes No

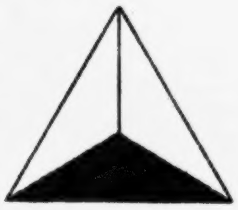


4. Draw a ring around the fraction which shows how much of the rectangle is shaded.



$\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{2}$

5. Draw a ring around the fraction which shows how much of the triangle is shaded.



$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

LEVEL C

Name ______________________________

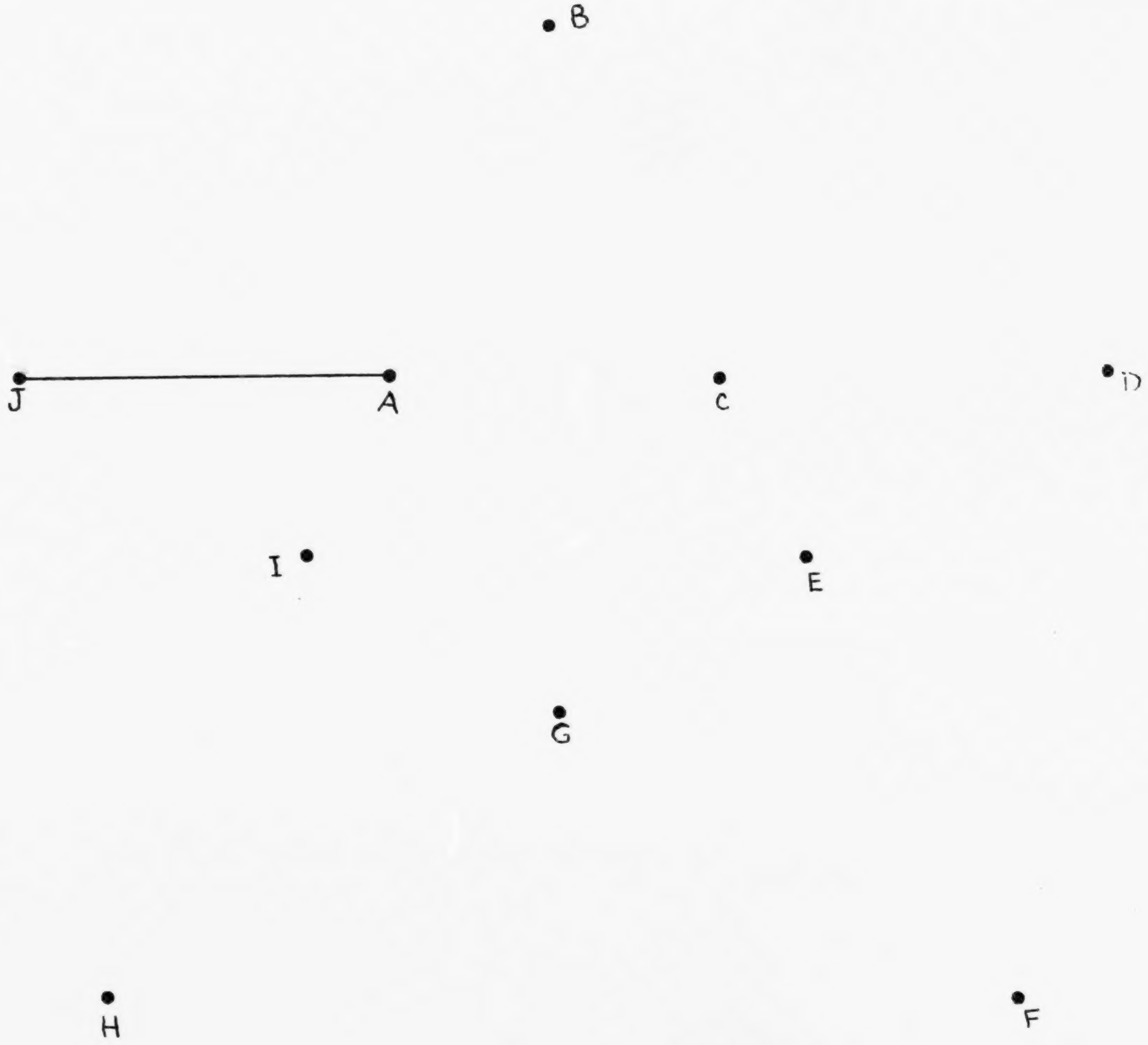
NON-METRIC GEOMETRY

Date ______________________________

Skill 1

Draw the line segments.

$\overline{AB}$ $\overline{BC}$ $\overline{CD}$ $\overline{DE}$ $\overline{EF}$ $\overline{FG}$ $\overline{GH}$ $\overline{HI}$ $\overline{IJ}$

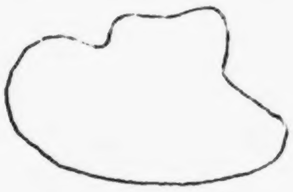


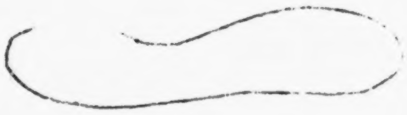
LEVEL C Name ______________________________

NON-METRIC GEOMETRY Date ______________________________

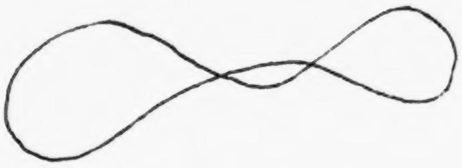
Skill 2, 3

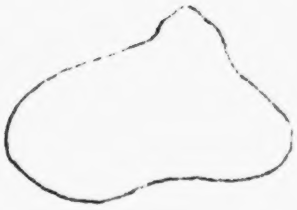
Put an X on the closed curve.



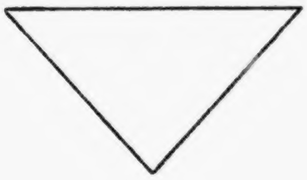


Put an X on the simple curve.





How many sides does each curve have?



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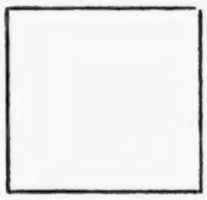

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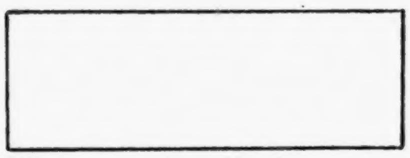
____

How many corners does each curve have?



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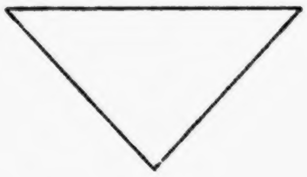

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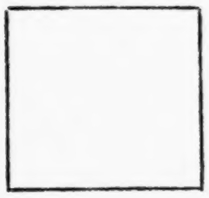

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LEVEL C

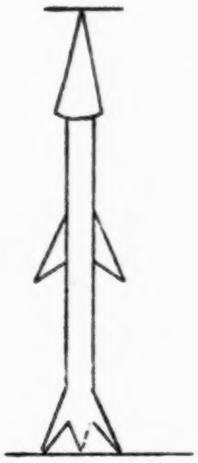
METRIC GEOMETRY

Skill 1, 2

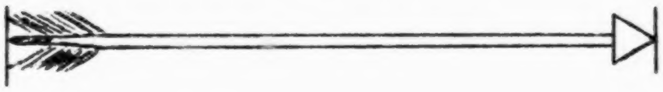
Name ____________________

Date ____________________

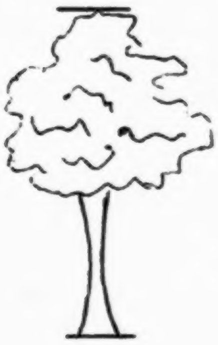
Measure to the nearest one-half inch.



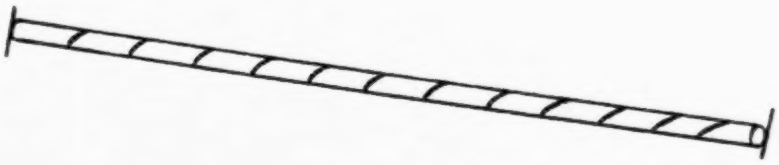
_______ inches



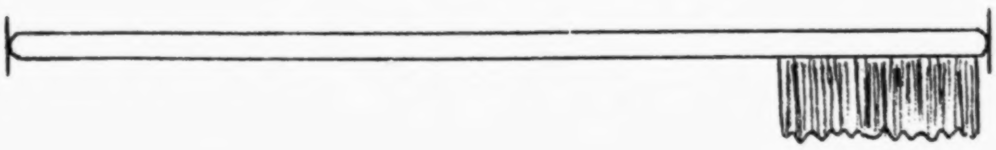
_______ inches



_______ inches



_______ inches



_______ inches

LEVEL C Name ________________________

METRIC GEOMETRY Date ________________________

Skill 3, 4

1. Circle the greater length.

   10 inches 1 foot

2. Circle the greater length.

   26 inches 2 feet

3. Circle the lesser length.

   1 foot 14 inches

4. Circle the lesser length.

   20 inches 2 feet

---

1. 2 pints = ________ cups

2. 1 quart = ________ pints

3. 2 pints = ________ quart

4. 4 quarts = _________ gallon

5. 2 half-gallons = _____ gallon

6. 2 quarts = ________ gallon

LEVEL C

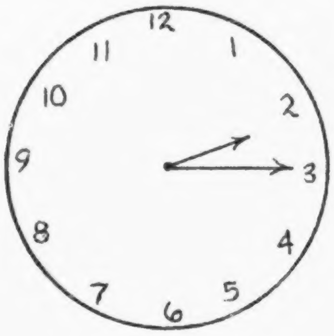
TIME

Skill 1

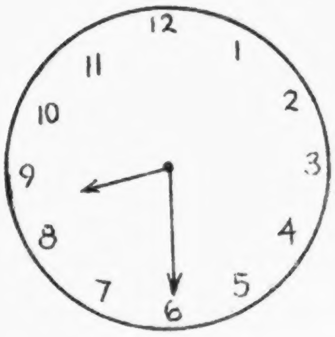
Name ______________________

Date ______________________

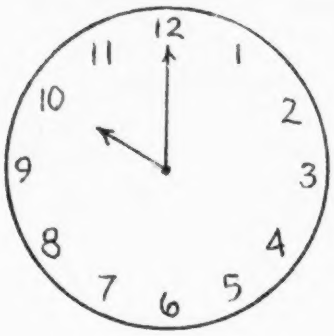
What time does each clock show?



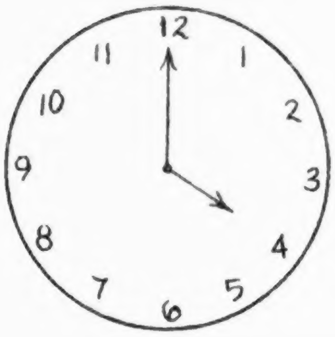
Quarter past ______



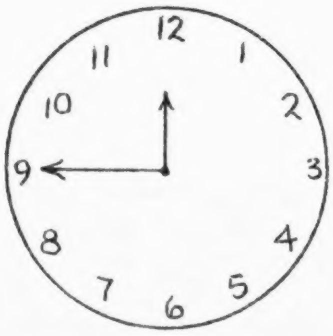
Half past ______



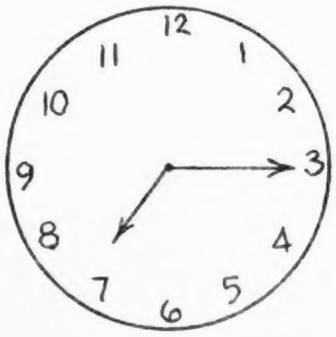
______ o'clock



______ o'clock



Quarter to ______



Quarter past ______

LEVEL C

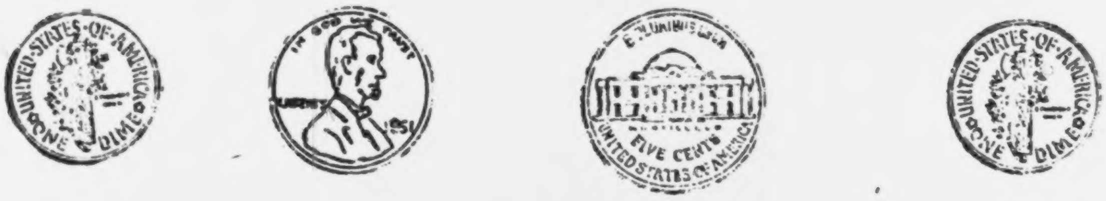
MONEY

Skill 1

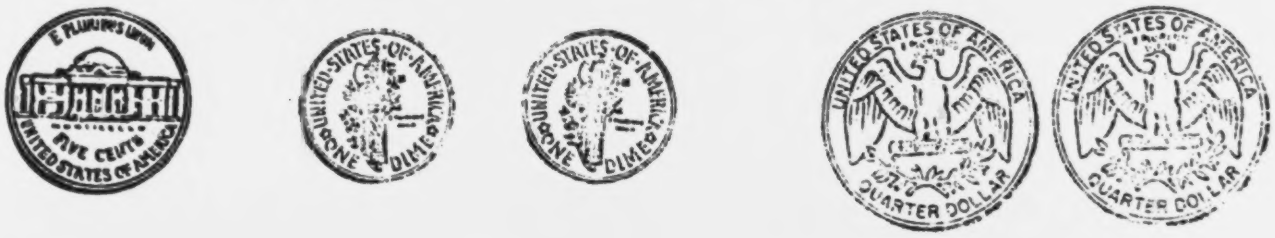
Name ______________________________

Date ______________________________

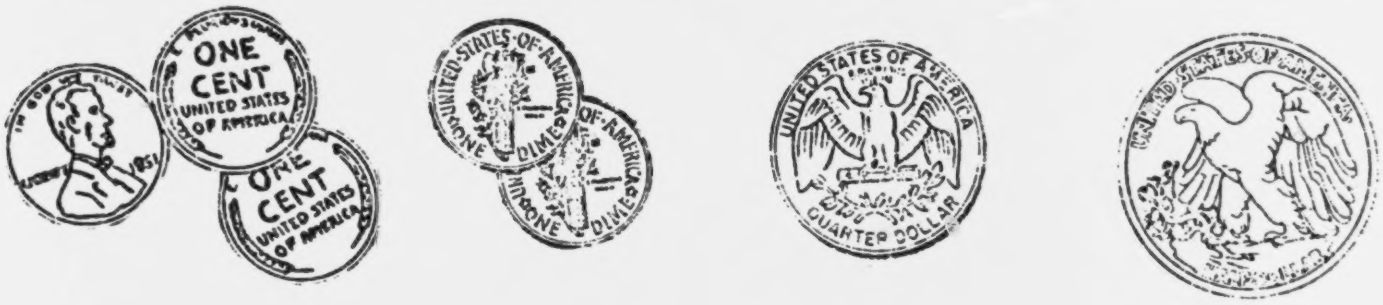
1. Circle the coins you would need to buy a ball for 25¢.


UNITED STATES OF AMERICA
ONE DIME
FIVE CENTS
1951

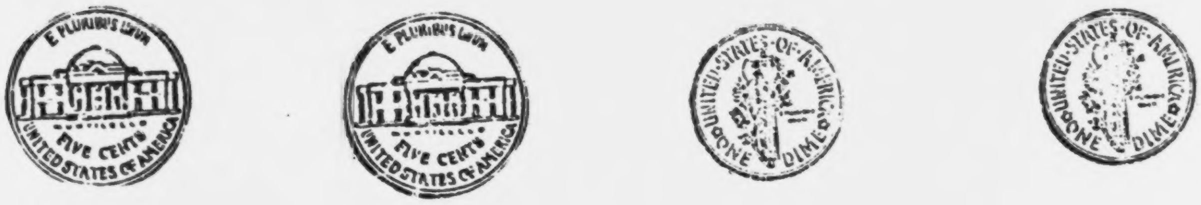
2. Circle the coins you would need to buy a toy truck for 50¢.


FIVE CENTS
ONE DIME
QUARTER DOLLAR

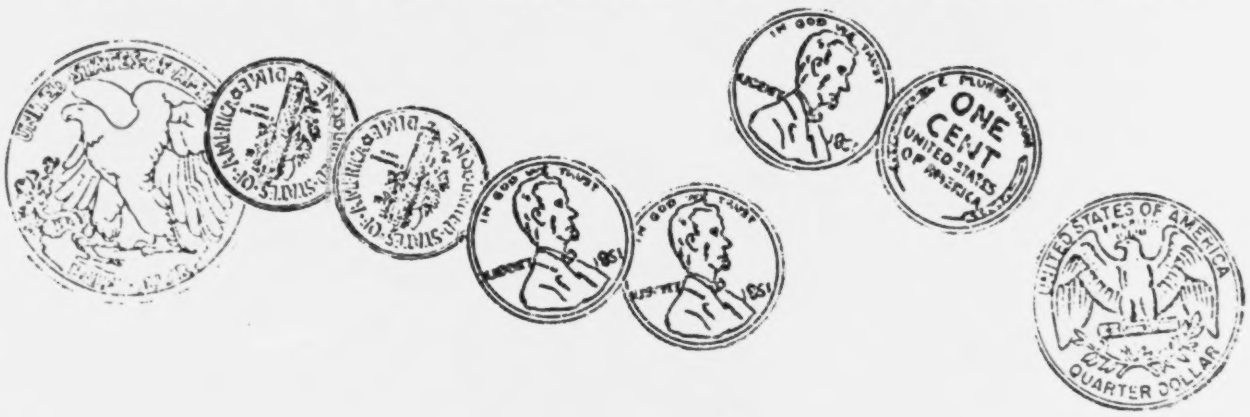
3. Circle the coin you would need to buy a balloon for 10¢.


ONE CENT
UNITED STATES OF AMERICA
ONE DIME
QUARTER DOLLAR

4. Circle the coins you would need to buy a top for 15¢.


FIVE CENTS
ONE DIME

5. Circle the coins you would need to buy a doll for 89¢.


ONE DIME
ONE CENT
QUARTER DOLLAR

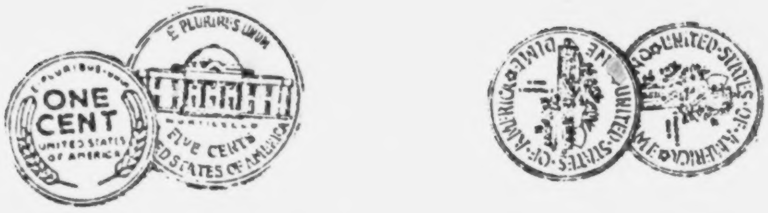
LEVEL C   Name ______________________

MONEY   Date ______________________

Skill 2

Find the values of these collections of coins.

1.



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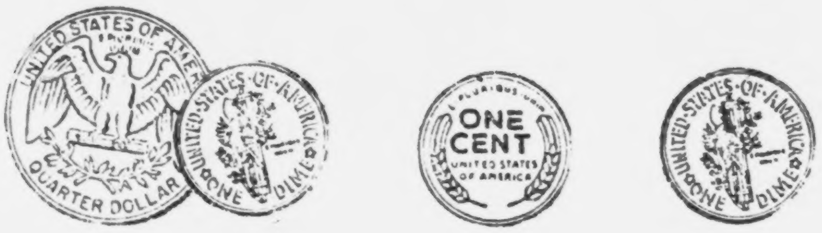
2.



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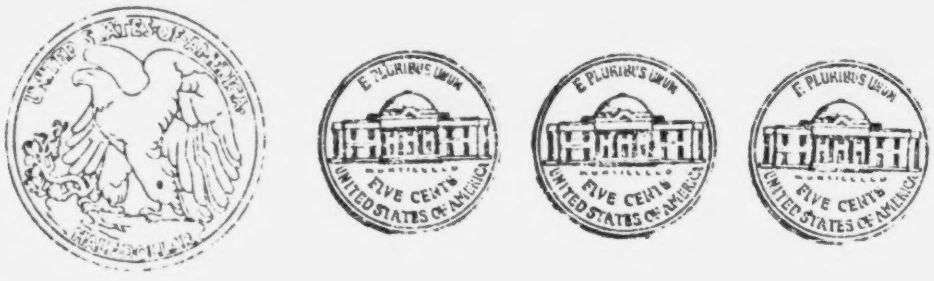
3.



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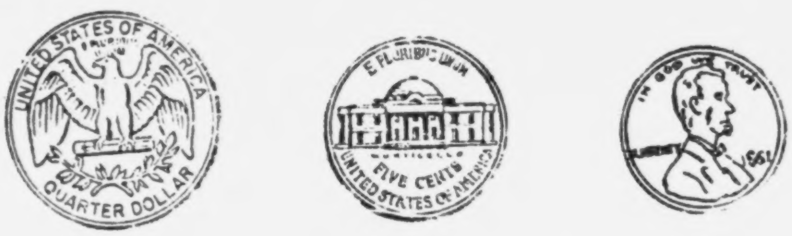
4.



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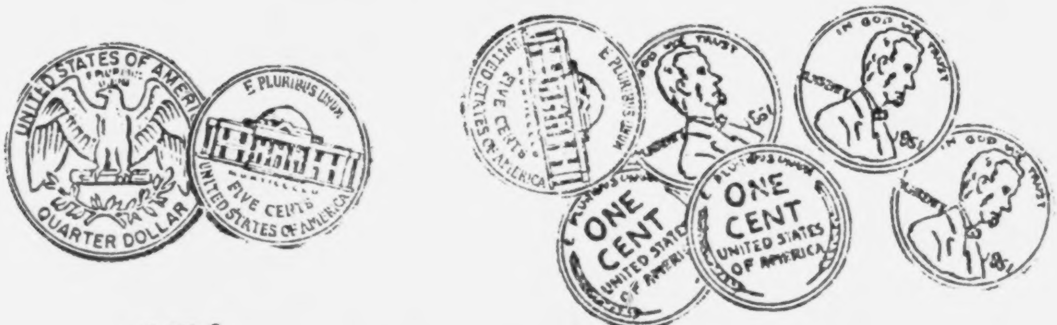
5.



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LEVEL C

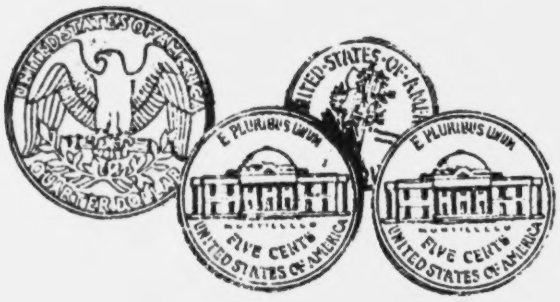
MONEY

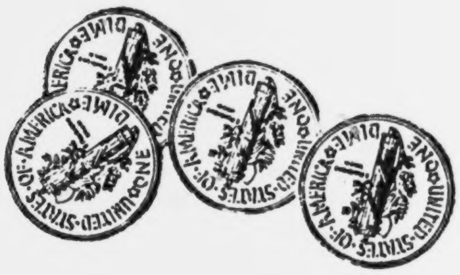
Skill 3

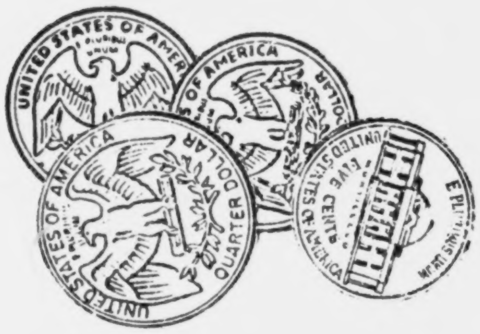
Name ______________________

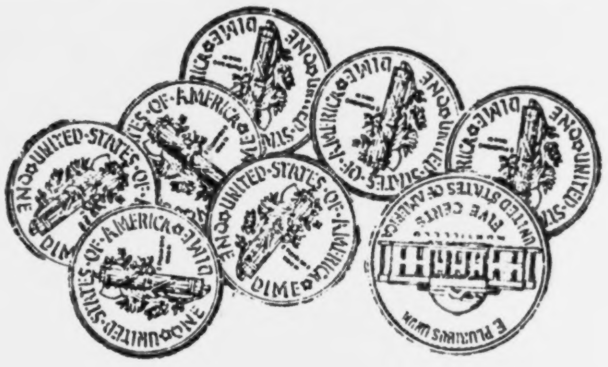
Date ______________________

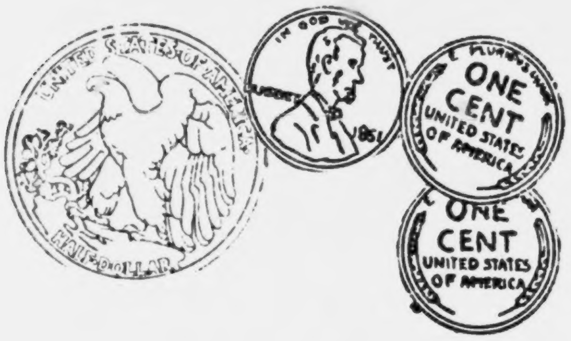
Mark the set of coins that has the greater value.

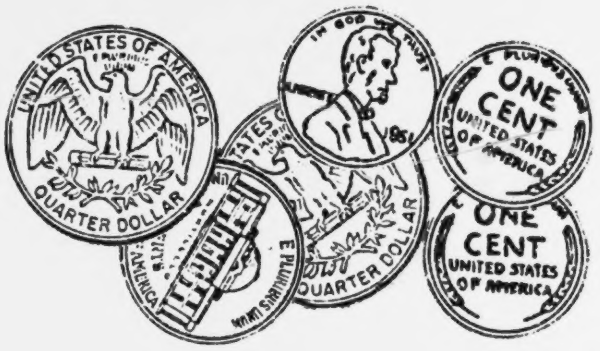


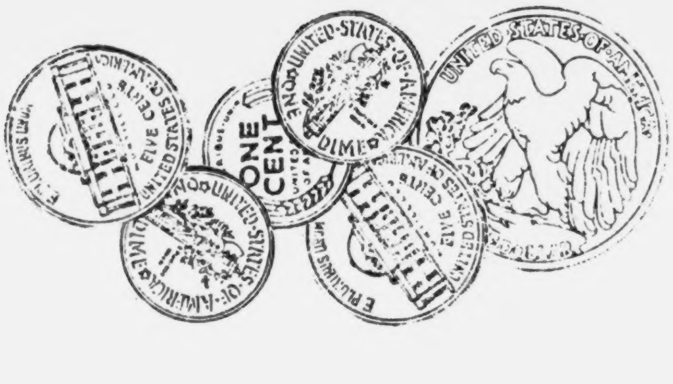


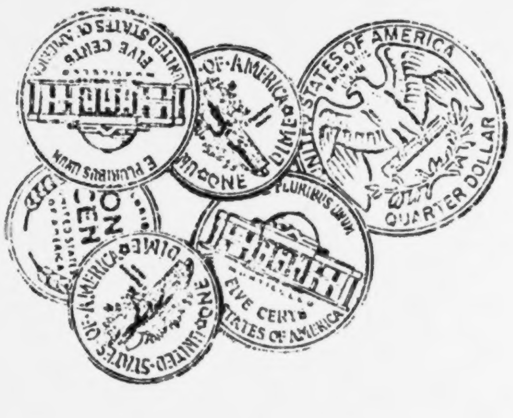












LEVEL C

NUMERATION

Skill 1

Name ____________________

Date ____________________

N U M E R A L

Write M in the third ☐

Write L in the seventh ☐

Write E in the fourth ☐

Write N in the first ☐

Write A in the sixth ☐

Write U in the second ☐

Write R in the fifth ☐

LEVEL C

NUMERATION

Skill 2, 3

Name ____________________

Date ____________________

Fill in the missing numerals.

1) 200, 199, 198, 197, 196, 195

2) 76, 77, 78, 79, 80, 81

3) 54, 55, 56, 57, 58, 59

4) 126, 127, 128, 129, 130, 131

5) 43, 42, 41, 40, 39, 38

6) 57, 47, 37, 27, 17, 7

7) 125, 135, 145. 155, 165, 175

8) 111, 121, 131, 141, 151, 161

9) 178, 168, 158, 148, 138, 128

10) 97, 87, 77, 67, 57, 47

LEVEL C

ADDITION AND SUBTRACTION

Skill 1 (Page 1 of 3 pages)

Name ______________________

Date ______________________

Name the sum or missing addend.

9 + 6 = 15 11 - 8 = 3 5 + 6 = 11

8 + 7 = 15 14 - 6 = 8 14 - 8 = 6

8 - 4 = 4 7 + 9 = 16 16 - 7 = 9

$\begin{array}{r} 7 \\ +6 \\ \hline 13 \end{array}$ $\begin{array}{r} 13 \\ -\ 8 \\ \hline 5 \end{array}$ $\begin{array}{r} 17 \\ -\ 8 \\ \hline 9 \end{array}$ $\begin{array}{r} 9 \\ +5 \\ \hline 14 \end{array}$ $\begin{array}{r} 16 \\ -\ 5 \\ \hline 11 \end{array}$ $\begin{array}{r} 12 \\ -\ 6 \\ \hline 6 \end{array}$ $\begin{array}{r} 15 \\ -\ 4 \\ \hline 9 \end{array}$

$\begin{array}{r} 8 \\ +8 \\ \hline 16 \end{array}$ $\begin{array}{r} 14 \\ -\ 5 \\ \hline 9 \end{array}$ $\begin{array}{r} 18 \\ -\ 9 \\ \hline 9 \end{array}$ $\begin{array}{r} 9 \\ +7 \\ \hline 16 \end{array}$ $\begin{array}{r} 7 \\ +6 \\ \hline 13 \end{array}$ $\begin{array}{r} 15 \\ -\ 6 \\ \hline 9 \end{array}$ $\begin{array}{r} 16 \\ -\ 4 \\ \hline 12 \end{array}$

10 + 2 = 12 6 + 7 = 13 8 + 7 = 15

2 + 10 = 12 7 + 6 = 13 7 + 8 = 15

18 - 9 = 9 16 - 5 = 11 17 - 4 = 13

9 + 9 = 18 11 + 5 = 16 13 + 4 = 17

LEVEL C

Name ________________

ADDITION AND SUBTRACTION

Date ________________

Skill 1 (Page 2 of 3 pages)

Timed:10 minutes

Add

2 +5 7	2 +10 12	7 +7 14	3 +2 5	10 + 1 11	4 +4 8	5 +3 8	4 +3 7	5 +0 5	0 +9 9
1 +2 3	7 +10 17	2 +6 8	3 +6 9	5 +6 11	10 + 7 17	4 +10 14	9 +7 16	3 +7 10	0 +6 6
3 +8 11	5 +7 12	8 +10 18	7 +1 8	9 +2 11	8 +5 13	10 + 2 12	8 +8 16	3 +4 7	8 +0 8
7 +8 15	6 +6 12	1 +10 11	4 +5 9	3 +3 6	7 +6 13	9 +3 12	8 +7 15	10 + 6 16	7 +4 11
0 +0 0	2 +4 6	10 + 7 17	9 +7 16	5 +8 13	4 +1 5	0 +2 2	4 +10 14	6 +8 14	4 +2 6
1 +5 6	3 +1 4	0 +8 8	7 +3 10	10 + 3 13	9 +8 17	8 +4 12	2 +7 9	6 +10 16	6 +5 11
8 +3 11	0 +10 10	6 +7 13	6 +9 15	9 +9 18	5 +4 9	8 +9 17	7 +5 12	2 +8 10	10 + 4 14
6 +2 8	9 +6 15	10 + 5 15	4 +6 10	6 +3 9	4 +8 12	6 +0 6	3 +9 12	5 +2 7	9 +4 13
5 +5 10	7 +2 9	3 +5 8	9 +5 14	3 +10 13	8 +6 14	0 +5 5	7 +0 7	1 +3 4	10 + 8 18
0 +4 4	2 +8 10	8 +2 10	4 +9 13	8 +1 9	2 +3 5	7 +9 16	5 +10 15	6 +4 10	0 +1 1

LEVEL C

ADDITION AND SUBTRACTION

Name ______________________

Date ______________________

Skill 1 (Page 3 of 3 pages)

Timed: 10 minutes

Subtract

12 -8 4	9 -4 5	6 -3 3	6 -4 2	9 -8 1	13 -7 6	11 -3 8	17 -9 8	15 -10 5	12 -5 7
12 -2 10	14 -5 9	13 -6 7	8 -4 4	17 -8 9	14 -6 8	13 -5 8	10 -6 4	9 -7 2	13 -10 3
10 -9 1	8 -5 3	9 -2 7	7 -0 7	7 -2 5	10 -7 3	16 -6 10	18 -10 8	11 -6 5	9 -5 4
5 -3 2	11 -2 9	13 -4 9	15 -5 10	14 -9 5	10 -8 2	12 -4 8	9 -6 3	7 -5 2	14 -8 6
7 -4 3	9 -0 9	4 -3 1	17 -7 10	15 -9 6	10 -4 6	10 -1 9	15 -8 7	16 -10 6	8 -7 1
5 -5 0	8 -3 5	10 -0 10	11 -7 4	8 -0 8	11 -5 6	6 -6 0	15 -7 8	17 -10 7	15 -6 9
10 -2 8	10 -10 0	3 -3 0	10 -5 5	12 -6 6	16 -9 7	12 -3 9	11 -4 7	14 -10 4	14 -7 7
11 -1 10	10 -3 7	18 -9 9	8 -1 7	12 -7 5	7 -3 4	18 -8 10	1 -0 1	16 -7 9	12 -9 3
6 -0 6	12 -10 2	13 -3 10	11 -9 2	13 -9 4	11 -8 3	13 -8 5	0 -0 0	7 -7 0	11 -10 1
4 -0 4	14 -4 10	5 -0 5	5 -2 3	16 -8 8	8 -6 2	8 -5 3	6 -2 4	8 -8 0	4 -4 0

LEVEL C

ADDITION AND SUBTRACTION

Skill 2

Name ____________________ ____

Date ____________________

Solve the equation.
Put parentheses ( ) to show which numbers are added first. *Answers will vary.*

$3 + 2 + 1 = \boxed{6}$ $6 + 3 + 2 = \boxed{11}$ $5 + 3 + 2 = \boxed{10}$

$2 + 2 + 1 = \boxed{5}$ $4 + 2 + 3 = \boxed{9}$ $7 + 2 + 4 = \boxed{13}$

Name the sums.

4	7	8	2	6	5	6	7
4	4	1	3	4	1	5	3
+4	+3	+2	+8	+4	+6	+3	+5
12	14	11	13	14	12	14	15

Write the numeral in the □ .

$$9 + 3 = 9 + (\boxed{1} + 2) = (9 + \boxed{1}) + \boxed{2}$$
$$= \boxed{10} + \boxed{2}$$
$$= \boxed{12}$$

$$4 + 3 + 6 = (4 + 3) + 6$$
$$= \boxed{7} + 6$$
$$= \boxed{13}$$

$$\begin{array}{r} 4 \\ + \boxed{\begin{array}{c} 3 \\ 6 \end{array}} \\ \hline \end{array} \begin{array}{c} \longrightarrow \\ \longrightarrow \\ \end{array} \begin{array}{r} 4 \\ \boxed{9} \\ \hline \boxed{13} \end{array}$$

LEVEL C

ADDITION AND SUBTRACTION

Skill 3

Name ____________________

Date ____________________

Complete these number sentences.

$4 + \boxed{9} = 13$

$9 + 7 = \boxed{16}$

$\boxed{4} + 3 = 7$

$\boxed{8} - 3 = 5$

$15 - \boxed{9} = 6$

$7 - \boxed{4} = 3$

Write + or - in each ○.

$8 \textcircled{-} 5 = 3$

$6 \textcircled{-} 3 = 3$

$2 \textcircled{+} 3 = 5$

$7 \textcircled{+} 3 = 10$

$4 \textcircled{-} 2 = 2$

$8 \textcircled{+} 5 = 13$

Write >, < or = in each ○.

$10 - 3 \textcircled{>} 6$

$8 - 3 \textcircled{=} 3 + 2$

$6 - 1 \textcircled{>} 2 + 2$

$4 + 5 \textcircled{>} 6 + 2$

$7 + 3 \textcircled{<} 5 + 9$

$8 \textcircled{<} 10$

$9 \textcircled{<} 10$

$4 - 2 \textcircled{<} 3$

$7 \textcircled{>} 4 + 1$

LEVEL C

ADDITION AND SUBTRACTION

Skill 4

Name ____________________

Date ____________________

Name the sums.

42	24	33	64	45	91
+5	+4	+3	+3	+4	+8
47	28	36	67	49	99

Write the numerals in each $\boxed{}$.

$47 = 40 + \boxed{7}$ so $47 + 4 = (\boxed{40} + \boxed{7}) + 4$

$= \boxed{40} \; (\boxed{7} + 4)$

$= \boxed{40} + \boxed{11} = \boxed{51}$

LEVEL C

ADDITION AND SUBTRACTION

Skill 5

Name ____________________

Date ____________________

Name the sums.

55	23	34	80	68	47	30	77
+43	+65	+23	+10	+20	+21	+69	+21
98	88	57	90	88	68	99	98

255	475	634	583	723	328	100
+734	+312	+243	+314	+246	+261	+800
989	787	877	897	969	589	900

LEVEL C

ADDITION AND SUBTRACTION

Skill 6

Name ____________________

Date ____________________

Name the missing addend.

26	58	45	99	18	39	46	79
-3	-5	-4	-2	-6	-7	-5	-6
23	53	41	97	12	32	41	73

Write the numeral in each ☐ .

26 - 4 = 22 65 - 5 = 60 49 - 3 = 46 18 - 6 = 12

LEVEL C

ADDITION AND SUBTRACTION

Skill 7

Name the missing addend.

Name ____________________

Date ____________________

70	67	85	54	96	85	43	78
-30	-24	-42	-33	-45	-35	-32	-46
40	43	43	21	51	50	11	32

976	355	856	548	689	454	793	932
-725	-245	-545	-217	-446	-332	-372	-621
251	110	311	331	243	122	421	311

LEVEL C

ADDITION AND SUBTRACTION

Skill 8

Name ______________________

Date ______________________

Write the numeral in the ☐ .

29 + 1 = $\boxed{30}$

74 + 7 = $\boxed{81}$

85 + 8 = $\boxed{93}$

65 + 5 = $\boxed{70}$

48 + 3 = $\boxed{51}$

39 + 7 = $\boxed{46}$

78 + 3 = $\boxed{81}$

59 + 4 = $\boxed{63}$

63 + 9 = $\boxed{72}$

Name the sums.

15	73	56	28	68	48	36	83
+6	+8	+6	+7	+7	+5	+6	+7
21	81	62	35	75	53	42	90

LEVEL C

ADDITION AND SUBTRACTION

Skill 9

Name ______________________

Date ______________________

Write the numeral in the ☐ .

80 - 7 = $\boxed{73}$

56 - 9 = $\boxed{47}$

32 - 4 = $\boxed{28}$

55 - 6 = $\boxed{49}$

73 - 7 = $\boxed{66}$

74 - 5 = $\boxed{69}$

43 - 5 = $\boxed{38}$

72 - 4 = $\boxed{68}$

66 - 9 = $\boxed{57}$

Name the missing addends.

31	73	82	64	45	62	76	58
-4	-6	-8	-7	-6	-9	-8	-9
27	67	74	57	39	53	68	49

LEVEL C

ADDITION AND SUBTRACTION

Skill 10

Name ____________________

Date ____________________

Complete the number patterns.

+	7	8	11	10	9
7	14	15	18	17	16

+	2	1	10	6	4
8	10	9	18	14	12

+	5	8	3	9	2
6	11	14	9	15	8

+	6	3	1	12	9
6	12	9	7	18	15

LEVEL C

ADDITION AND SUBTRACTION

Skill 11

Name ____________________

Date ____________________

Name the sums.

68	59	47	27	39	63	74	55
+15	+27	+36	+25	+42	+28	+17	+36
83	86	83	52	81	91	91	91

18	33	25	36	65	77	66	49
+29	+19	+49	+36	+15	+17	+29	+26
47	52	74	72	80	94	95	75

LEVEL C

ADDITION AND SUBTRACTION

Skill 12

Name ______________________

Date ______________________

Solve the equations.

80 - 56 = $\boxed{24}$ 71 - 43 = $\boxed{28}$ 45 - 27 = $\boxed{18}$

Name the missing addends.

81	73	91	44	96	55	94	61
-29	-57	-66	-17	-77	-16	-59	-42
52	16	25	27	19	39	35	19

LEVEL C

ADDITION AND SUBTRACTION

Skill 13

Name ______________________

Date ______________________

Name the sums and the missing addends.

93	8	59	27	39	46	695	754
-29	+9	-6	+2	-4	+28	-233	-243
64	17	53	29	35	74	462	511

618	723	606	74	536	986
+321	-512	+221	-35	+422	-733
939	211	827	39	958	253

LEVEL C

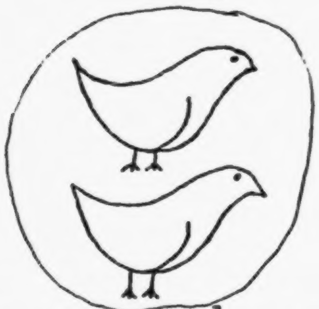
FRACTIONS

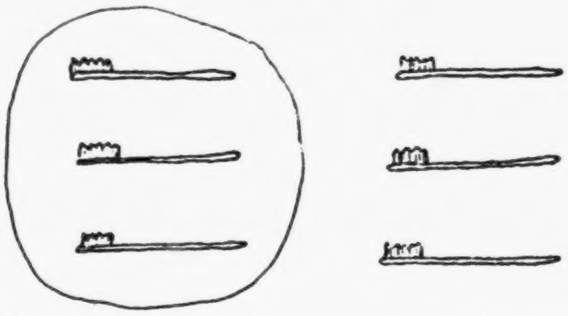
Skill 1, 5

Name ______________________

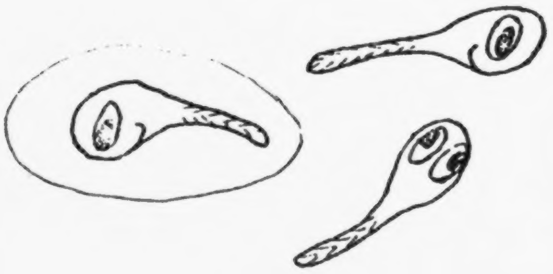
Date ______________________

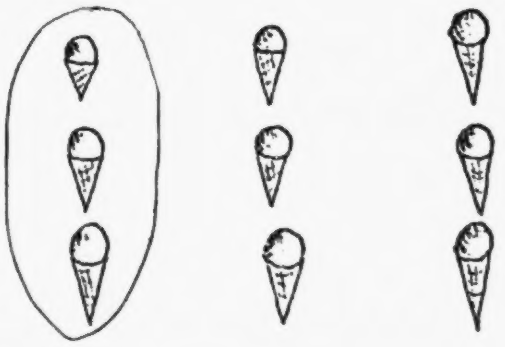
1. Ring $\frac{1}{2}$ of the objects in each set.



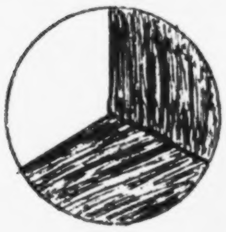


2. Ring $\frac{1}{3}$ of the objects in each set.

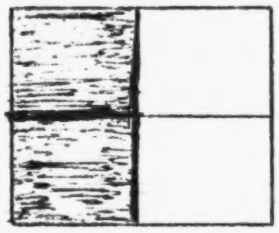




3. Write $\frac{2}{3}$ under the regions that are two thirds colored.



$\frac{2}{3}$



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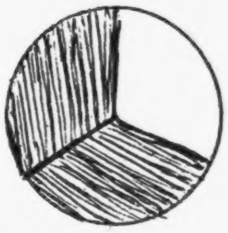
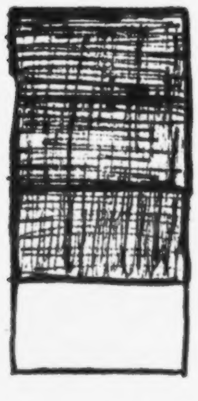
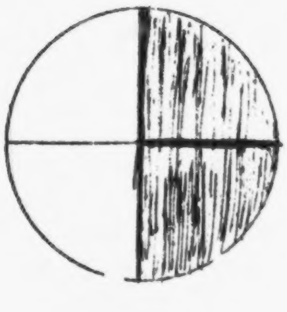


$\frac{2}{3}$

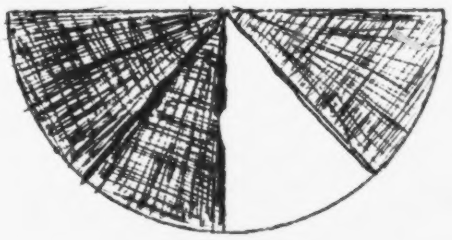
4. Write $\frac{3}{4}$ under the regions that are three fourths colored.



$\frac{3}{4}$



_____



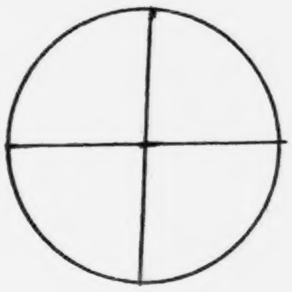
$\frac{3}{4}$

LEVEL C
FRACTIONS
Skill 2

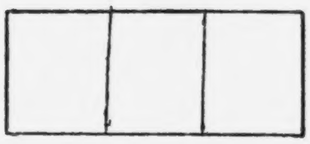
Name ______________________

Date ______________________

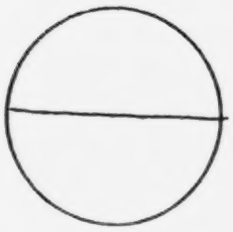
1. Divide this circle into fourths.



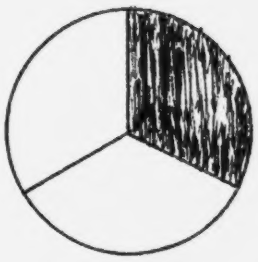
2. Divide this rectangle into thirds.



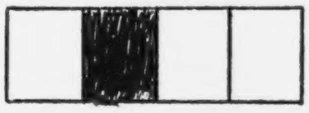
3. Divide this circle into halves.



4. One of 3 equal parts has been shaded.



5. One of 4 equal parts has been shaded.



LEVEL C

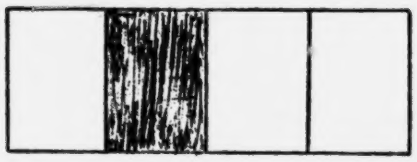
FRACTIONS

Skill 4

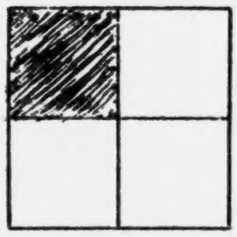
Name ______________________

Date ______________________

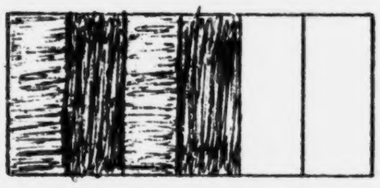
1. Draw a ring around the fraction which shows how much of the rectangle is shaded.



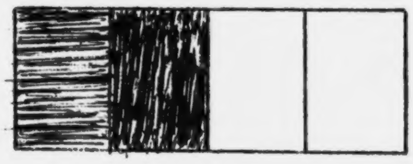
$\frac{1}{2}$ $\frac{1}{3}$ [✓ $\frac{1}{4}$]

2. What part of the  is shaded?

$\frac{1}{3}$ [✓ $\frac{1}{4}$] $\frac{1}{2}$

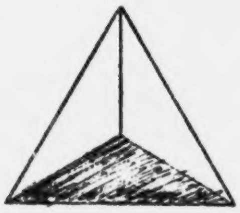
3. Is $\frac{1}{2}$ of this  shaded? Yes [✓ No]

4. Draw a ring around the fraction which shows how much of the rectangle is shaded.



$\frac{1}{4}$ $\frac{1}{3}$ [✓ $\frac{1}{2}$]

5. Draw a ring around the fraction which shows how much of the triangle is shaded.



$\frac{1}{2}$ [✓ $\frac{1}{3}$] $\frac{1}{4}$

LEVEL C

NON-METRIC GEOMETRY

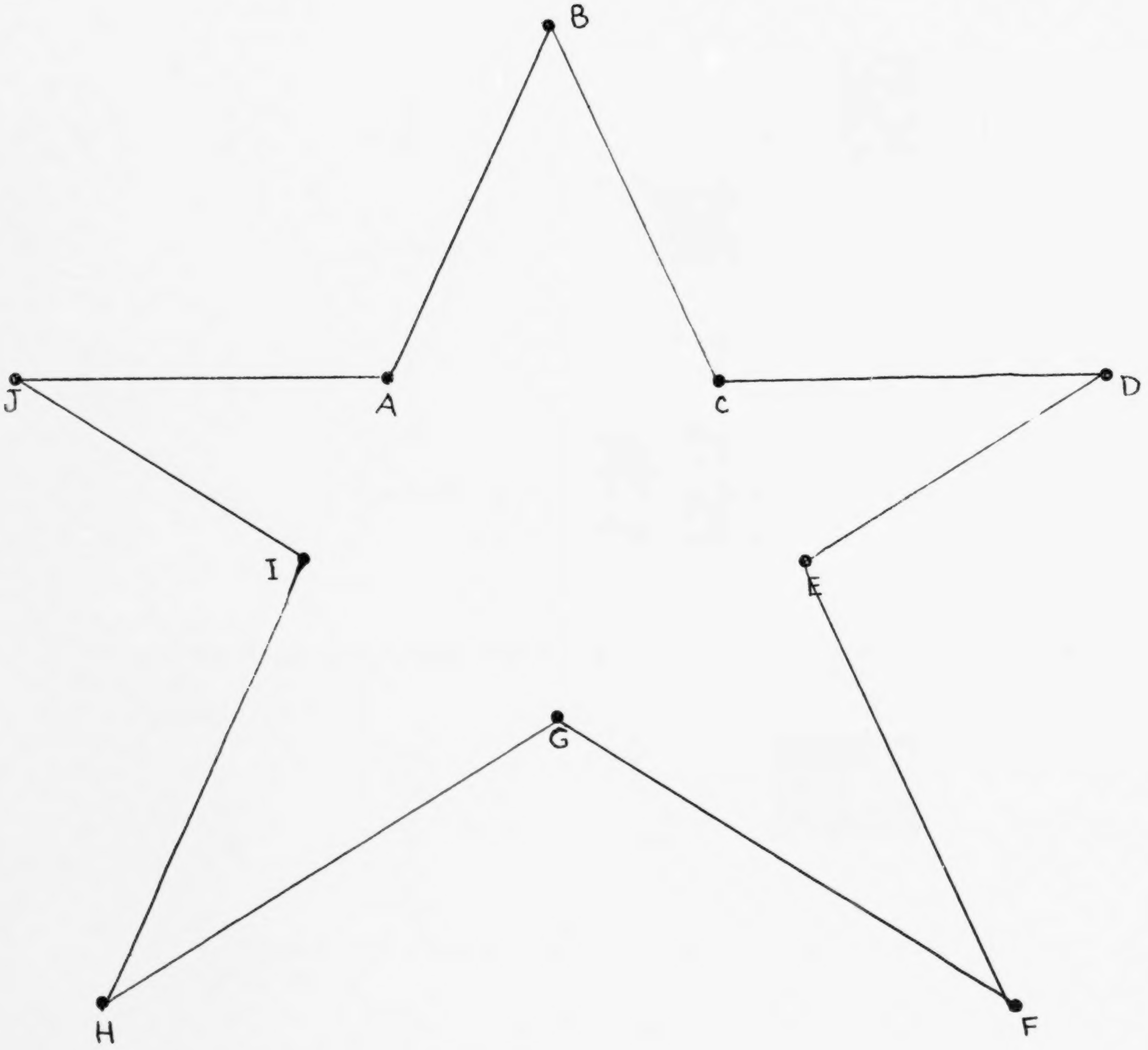
Skill 1

Name ________________________

Date ________________________

Draw the line segments.

$\overline{AB}$ $\overline{BC}$ $\overline{CD}$ $\overline{DE}$ $\overline{EF}$ $\overline{FG}$ $\overline{GH}$ $\overline{HI}$ $\overline{IJ}$



LEVEL C

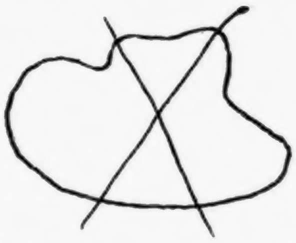
NON-METRIC GEOMETRY

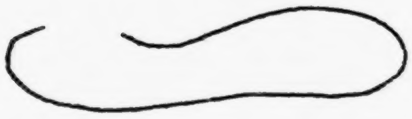
Skill 2, 3

Name ________________________

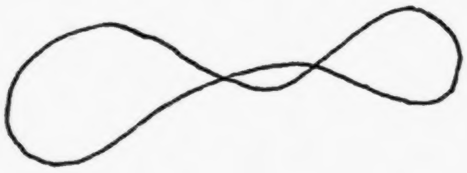
Date ________________________

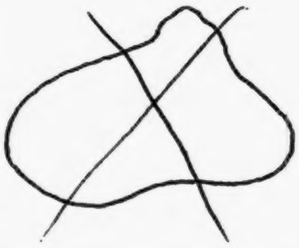
Put an X on the closed curve.



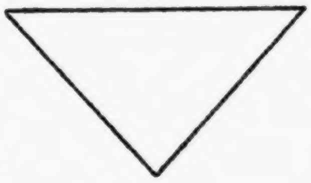


Put an X on the simple curve.

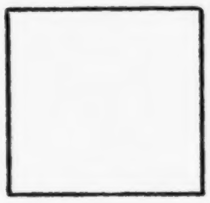




How many sides does each curve have?



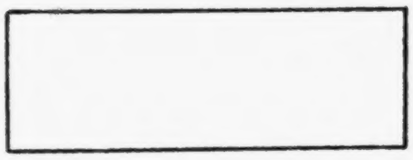
3



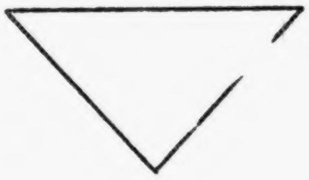
4

4

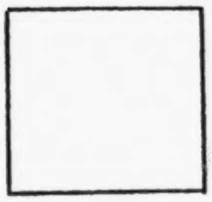
How many corners does each curve have?



4



3



4

LEVEL C

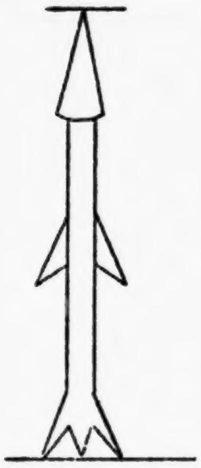
METRIC GEOMETRY

Skill 1, 2

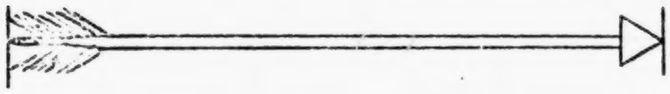
Name ______________________

Date ______________________

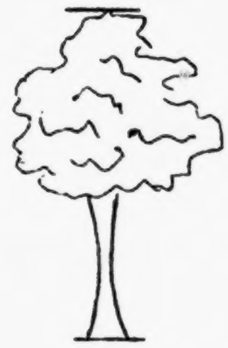
Measure to the nearest one-half inch.



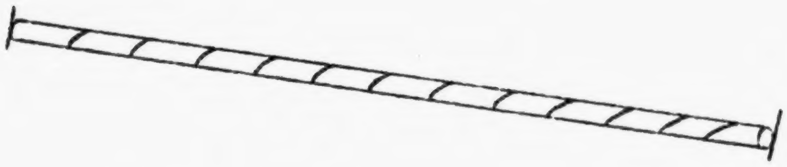
2 inches



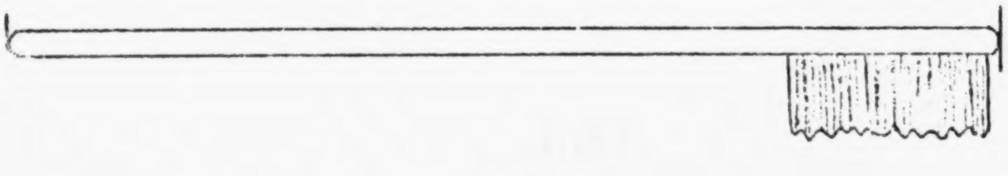
3 inches



$1\frac{1}{2}$ inches



$3\frac{1}{2}$ inches



$4\frac{1}{2}$ inches

LEVEL C

METRIC GEOMETRY

Skill 3, 4

Name ______________________

Date ______________________

1. Circle the greater length.

   10 inches [✓ 1 foot]

2. Circle the greater length.

   [✓ 26 inches] 2 feet

3. Circle the lesser length.

   [✓ 1 foot] 14 inches

4. Circle the lesser length.

   [✓ 20 inches] 2 feet

---

1. 2 pints = 4 cups
2. 1 quart = 2 pints
3. 2 pints = 1 quart
4. 4 quarts = 1 gallon
5. 2 half-gallons = 1 gallon
6. 2 quarts = $\frac{1}{2}$ gallon

LEVEL C

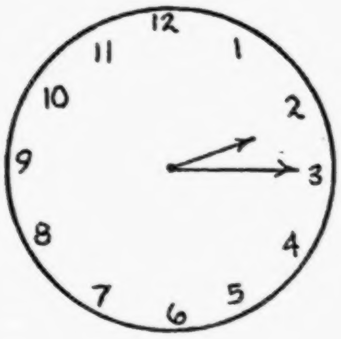
TIME

Skill 1

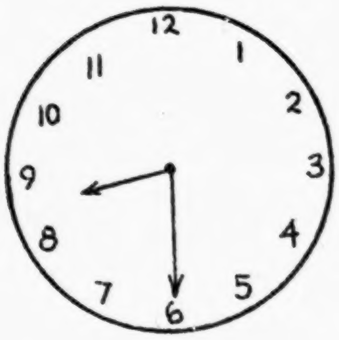
Name ____________________

Date ____________________

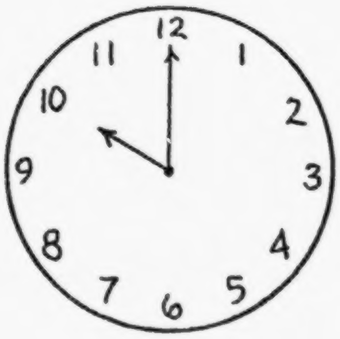
What time does each clock show?



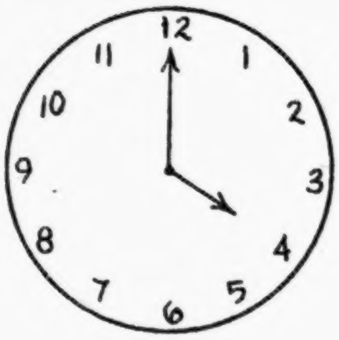
Quarter past 2



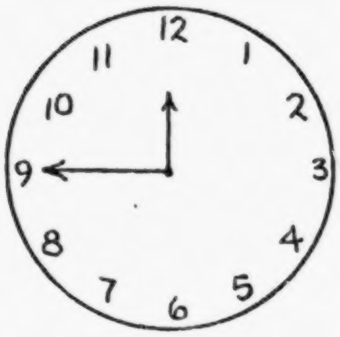
Half past 8



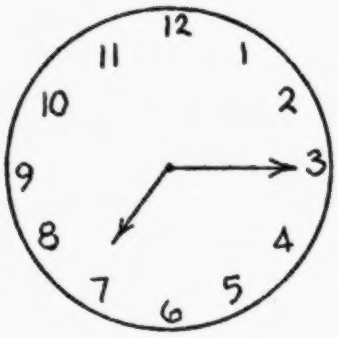
10 o'clock



4 o'clock



Quarter to 12



Quarter past 7

LEVEL C

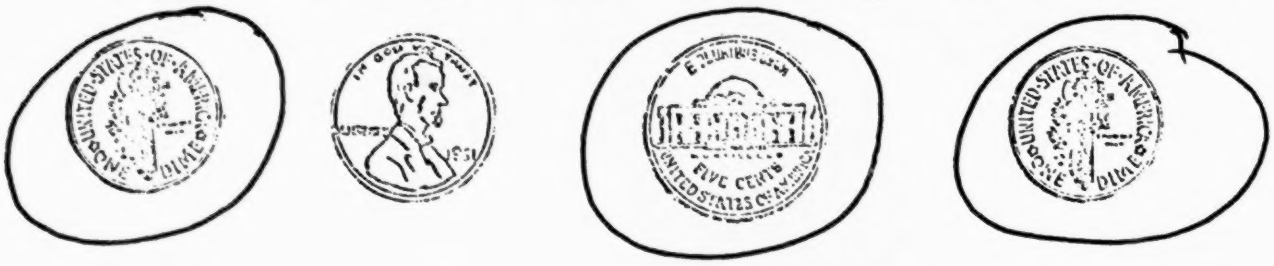
MONEY

Skill 1

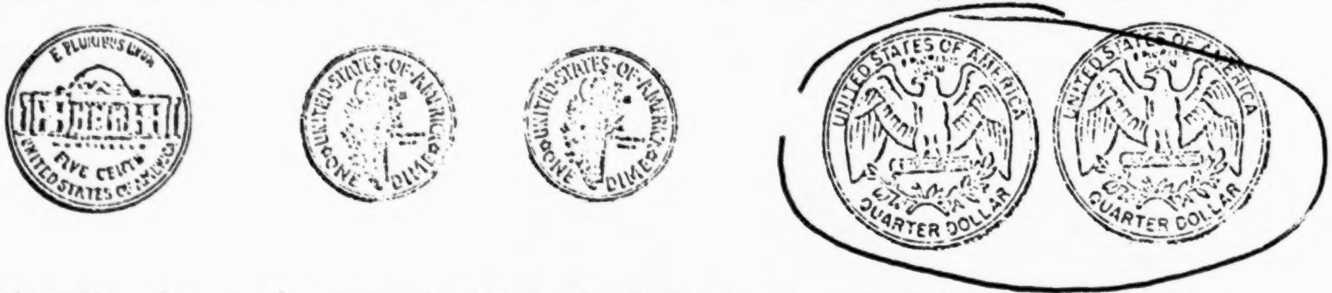
Name ______________________

Date ______________________

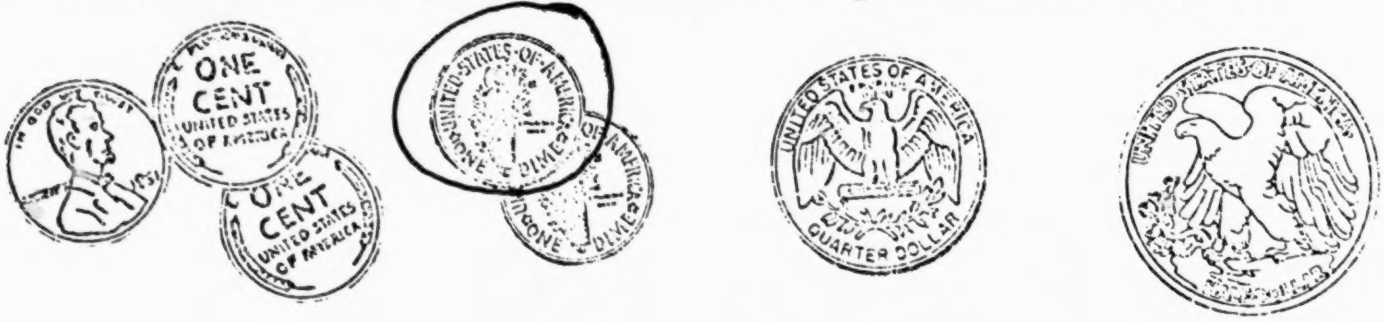
1. Circle the coins you would need to buy a ball for 25¢.



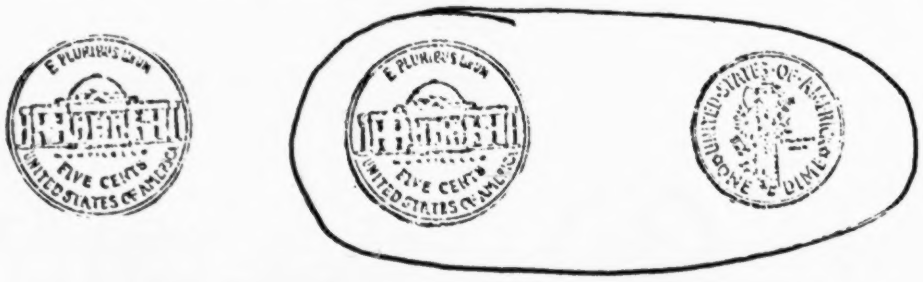
2. Circle the coins you would need to buy a toy truck for 50¢.



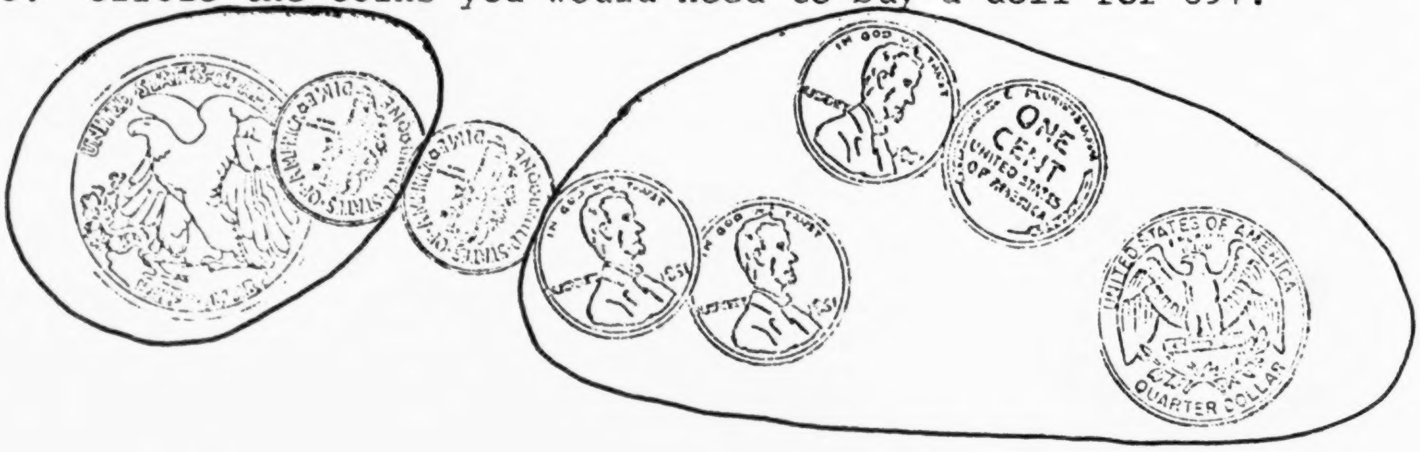
3. Circle the coin you would need to buy a balloon for 10¢.



4. Circle the coins you would need to buy a top for 15¢.



5. Circle the coins you would need to buy a doll for 89¢.



LEVEL C

MONEY

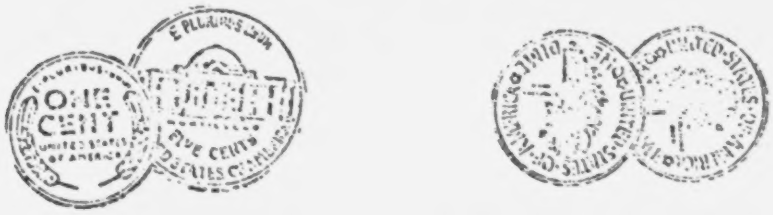
Skill 2

Name ______________________

Date ______________________

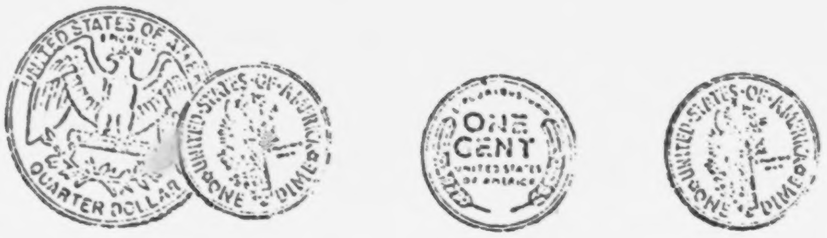
Find the values of these collections of coins.

1.


E PLURIBUS UNUM
ONE CENT
FIVE CENTS
UNITED STATES OF AMERICA
ONE DIME

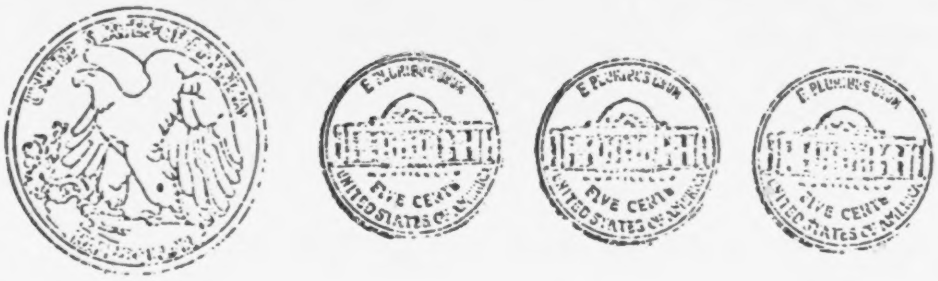
26 ¢

2.


UNITED STATES OF AMERICA
QUARTER DOLLAR
ONE DIME
ONE CENT

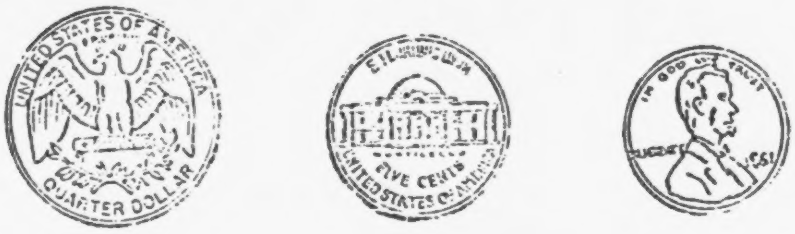
46 ¢

3.


E PLURIBUS UNUM
FIVE CENTS
UNITED STATES OF AMERICA

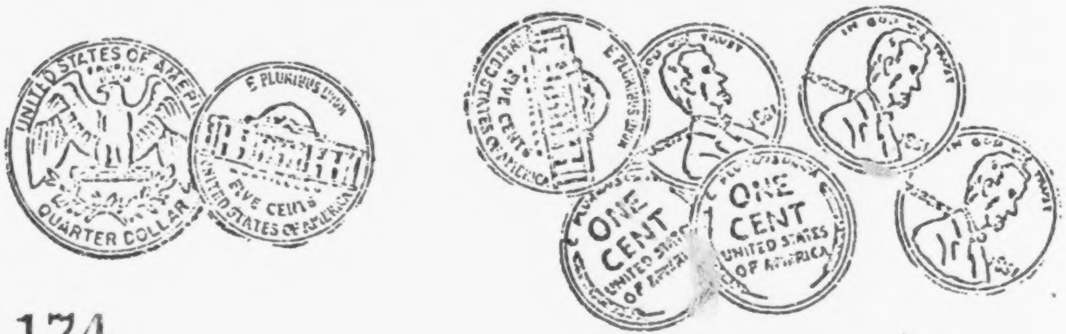
65 ¢

4.


UNITED STATES OF AMERICA
QUARTER DOLLAR
E PLURIBUS UNUM
FIVE CENTS
IN GOD WE TRUST
LIBERTY

31 ¢

5.


UNITED STATES OF AMERICA
QUARTER DOLLAR
E PLURIBUS UNUM
FIVE CENTS
IN GOD WE TRUST
ONE CENT

40 ¢

LEVEL C

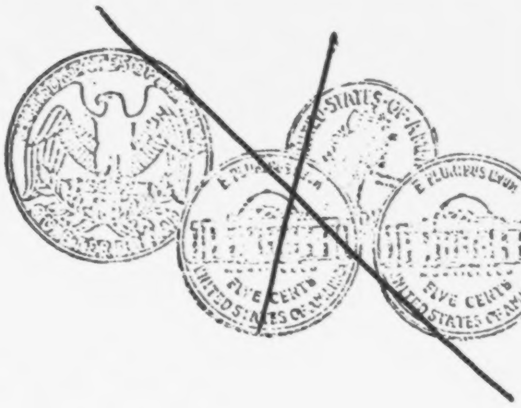
MONEY

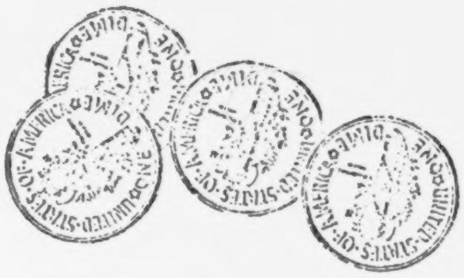
Skill 3

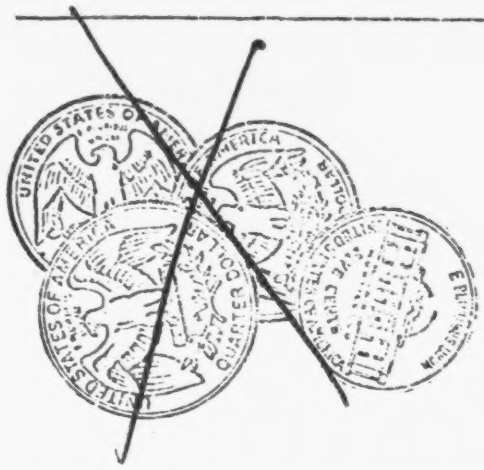
Name ____________________

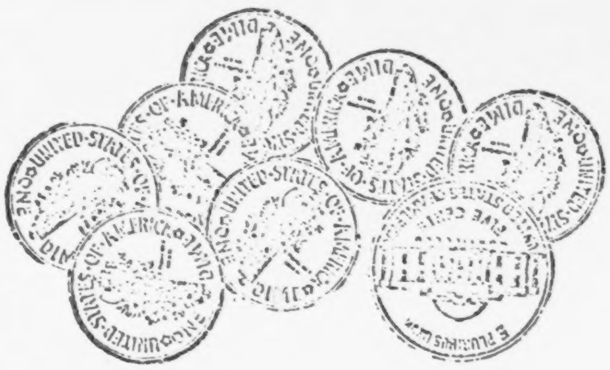
Date ____________________

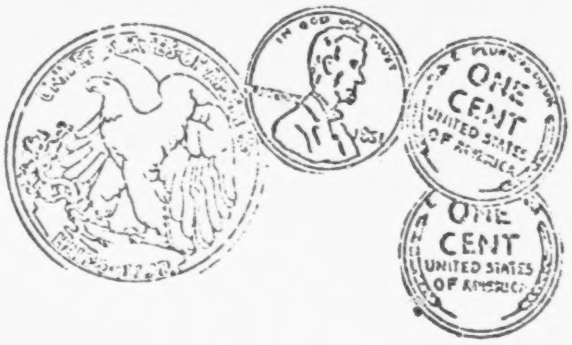
Mark the set of coins that has the greater value.

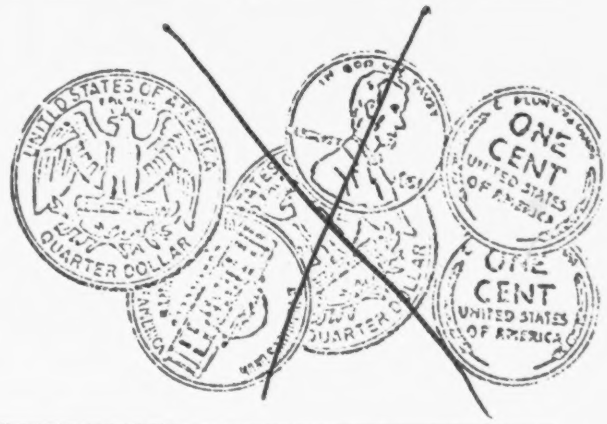


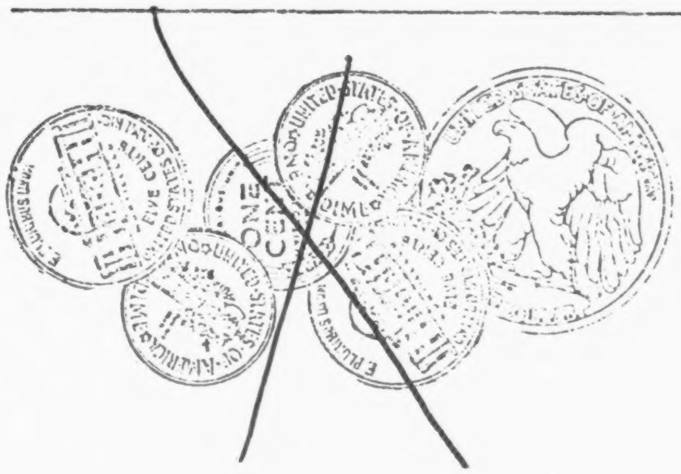


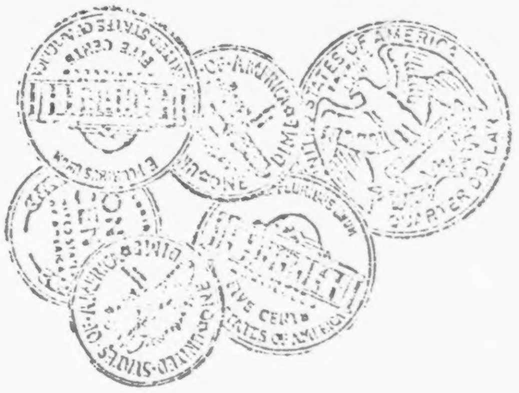












MATHEMATICS CONTINUUM

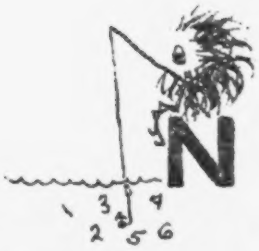
LEVEL D

BOOK 3

Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and continuum mastery tests should be used to provide sufficient evidence to check the 70-100% (mastery level) for each skill.

LEVEL D

NUMERATION



Review of Level C Skills

C Numeration 1

Develop set notation ({ }) and terminology including subset, cardinal number, digit and numeral.

Example

Numeration

1. Reads and writes numbers to 9,999. Reads and writes short sequences of numbers from any starting point forward and in reverse (including before, after and in between concepts). Teacher note: Encourage stating sequences by hundreds and thousands.

Write the numerals to complete this pattern.

98, 99, $\boxed{100}$, $\boxed{101}$, 102

2. Completes patterns for skip counting by 10's, 5's and 2's from any starting point, forward and in reverse. Numbers to 1,000.

Write the numerals to complete this pattern.

700, 690, 680, $\boxed{670}$, $\boxed{660}$

3. Identifies positional value of digits and writes place value and/or total value in short form or expanded form. Converts number words to numerals. Teacher note: Practice in scrambled notation should be given.

Write a 4-digit numeral.

2000 + 300 + 50 + 4 = 2354

five thousand, two hundred thirty-three = 5,233

	Th	O	H	T
706				
2460				
24				

4. Expresses the relationship between two numbers to 1,000 by using > (greater than), < (less than), and = (equals).

Write > , < or = in the ○.

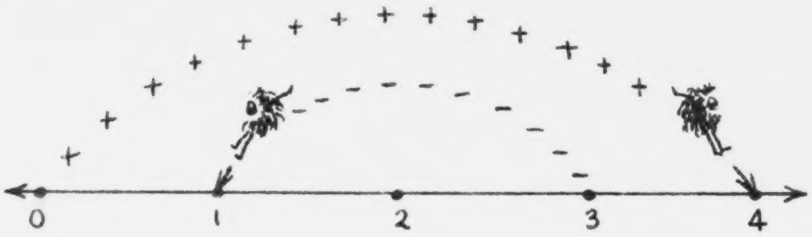
793 (>) 783

Textual Resources	Related Resources	Notes
Numeration		
Review		
HM Book 3, p. 12 Use orally		
HM Book 3, pp. 1-4, 6	HM Visuals 3 (1) HM Masters 3 (1)	
1. HM Book 3, pp. 10, 24, 28	HM Visuals 3 (2)	
2. HM Book 3, p. 18		
3. HM Book 3, teacher's page 26 HM Book 3, pp. 7-9, 20, 25, 29 In-Depth 26, 27, 31	HM Visuals 3 (2) HM Masters 3 (2, 8)	
4. HM Book 3, pp. 5, 11,	HM Masters 3 (3)	

LEVEL D	Example
Numeration	Numeration
5. Mixed Practice.	
6. In-Depth.	

ADDITION AND SUBTRACTION

Addition and Subtraction



Review of Level C Skills

Review of Level C Skills	Example
C Add. & Sub. 1 C Add. & Sub. 3	Review of addition facts.
C Add. & Sub. 4 C Add. & Sub. 5 C Add. & Sub. 6 C Add. & Sub. 7 C Add. & Sub. 8 C Add. & Sub. 9 C Add. & Sub. 10	

1. Uses the words "sum" and "addend" to label the parts of an addition problem.

Write the word "addend" or "sum" to label the problem.

$$\begin{array}{rl} 4 & \underline{\text{addend}} \\ +\ 7 & \underline{\text{addend}} \\ \hline 11 & \underline{\text{sum}} \end{array}$$

2. Finds the missing addend for problems containing three single digit addends using the associative property. Sums to 27.

Name the missing addend.

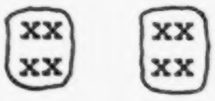
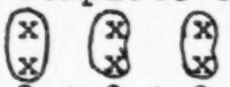
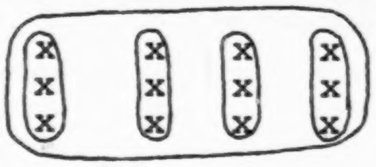
$2 + \boxed{7} + 8 = 17$

$$\begin{array}{r} 3 \\ 4 \\ +\ \boxed{6} \\ \hline 13 \end{array}$$

Textual Resources	Related Resources	Notes
Numeration		
5. HM Book 3, pp. 13, 19, 21, 30	HM Masters 3 (4, 6, 7)	
6. HM Book 3, pp. 222-234, 240-245, 249, 250	HM Visuals 3 (22-25) HM Masters 3 (58-60, 62)	
Addition and Subtraction		
Review		
HM Book 3, pp. 32, 33, 36-38, 59	HM Masters 3 (10)	
HM Book 3, pp. 94, 95		
HM Book 3, p. 102		
HM Book 3, pp. 96, 97	HM Masters 3 (26)	
HM Book 3, p. 103		
HM Book 3, pp. 98, 99	HM Masters 3 (27)	
HM Book 3, pp. 100, 101	HM Masters 3 (28)	
HM Book 3, p. 39	HM Visuals 3 (3)	
	HM Masters 3 (11)	
1. HM Book 3, pp. 34, 35 teacher's page 53	HM Masters 3 (9)	
2. HM Book 3, pp. 40-45, 51 In-Depth p. 60 , 61	HM Masters 3 (12-14)	

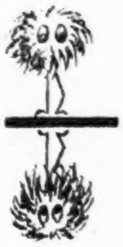
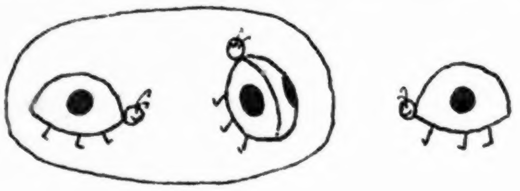
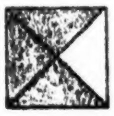
LEVEL D	Example
Addition and Subtraction	Addition and Subtraction
3. Does two-place addition with renaming of ones as tens.	Add. $\begin{array}{r} 27 \\ +48 \\ \hline 75 \end{array}$
4. Does two-place subtraction with renaming of 1 ten as 10 ones.	Subtract. $\begin{array}{r} 92 \\ -\ 47 \\ \hline 45 \end{array}$
5. Does two or three-place addition and subtraction problems with no renaming.	Add or subtract. $\begin{array}{r} 479 \\ +\ 220 \\ \hline 699 \end{array} \qquad \begin{array}{r} 987 \\ -\ 432 \\ \hline 555 \end{array}$
6. Does three-place addition of two or more addends with renaming to tens or hundreds place. Sums to 1,000.	Add. $\begin{array}{r} 260 \\ +\ 449 \\ \hline 709 \end{array} \qquad \begin{array}{r} 263 \\ +\ 329 \\ \hline 592 \end{array}$
7. Does three-place subtraction with renaming from tens or hundreds place.	Subtract. $\begin{array}{r} 481 \\ -\ 237 \\ \hline 244 \end{array}$
8. Solves one step word problems involving skills from money, time, measurement and other topics learned to this point. Teacher note: Introduce the five-step method. See teacher's page 66.	
9. Supplies the missing sign, >, <, = with addition and subtraction expressions.	Write >, <, or = in the ○. 3 + 6 ⊜ 4 + 5 7 > 6, so 7 + 2 ⧁ 6 + 2
10. Mixed Practice.	

Textual Resources	Related Resources	Notes
Addition and Subtraction		
3. HM Book 3, pp. 114, 115, 117, 315	HM Masters 3 (33)	
4. HM Book 3, pp. 118-120	HM Masters 3 (34)	
5. HM Book 3, pp. 106-113	HM Visuals 3 (9, 10) HM Masters 3 (30-32)	
6. HM Book 3, p. 116 In-Depth pp. 180-182, 184, 185, 217, 320, 321	HM Visuals 3 (17) HM Masters 3 (45-47)	
7. HM Book 3, p. 119	HM Masters 3 (34)	
8. HM Book 3, 46, 47, 49, 54, 55, 104, 105, 122 In-Depth p. 183	HM Masters 3 (15, 16, 29)	
9. HM Book 3, p. 53		
10. HM Book 3, pp. 52, 56-58, 78, 79, 90, 104, 121, 123, 124, 158, 178, 179 In-Depth pp. 125, 318, 319	HM Masters 3 (17, 29, 35)	

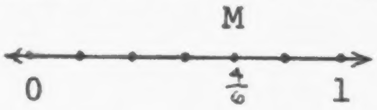
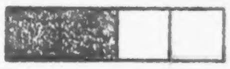
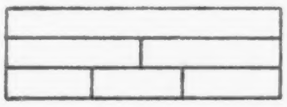
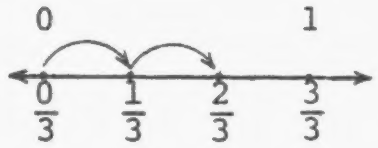
LEVEL D MULTIPLICATION AND DIVISION	Example Multiplication and Division
1. Groups sets (or pictured sets) into subsets of equal number to complete statements such as, "3 sets of 2 = ☐ " and "3 x 2 = ☐ ". Factors no larger than 5.	Complete the statements.  2 sets of 4 = $\boxed{8}$; 2 x 4 = $\boxed{8}$
2. Uses repeated addition to solve multiplication problems using pictures or a number line. Products to 5 x 10.	Complete each equation.  2 + 2 + 2 = $\boxed{6}$; 3 x 2 = $\boxed{6}$
3. Divides sets (or picture of sets) into subsets of equal number to complete statements such as, "6 = ☐ sets of 2", and "6 ÷ 2 = ☐ ".	Complete the statements.  12 = $\boxed{4}$ sets of 3; 12 ÷ 4 = $\boxed{3}$
4. Uses known multiplication facts to solve related division problems. Products to 5 x 10. Teacher note: Reinforce the commutative principle for multiplication and the inverse operation of multiplication and division.	2 x 3 = 6, so 6 ÷ 3 = $\boxed{2}$
5. Recognizes the special properties of 0 and 1 when used as factors or divisors.	Zero property 0 x m = 0 One property 1 x m = m and m ÷ 1 = m
*6. Demonstrates oral and written mastery of multiplication and division facts with factors through 5.	

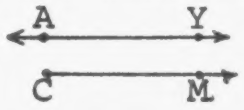
Textual Resources	Related Resources	Notes
Multiplication and Division		
1.		
2. HM Book 3, pp. 126, 127, 132, 133, 136, 137, 141, 142	HM Visuals 3 (11)	
3.		
4. HM Book 3, pp. 128-130, 134, 138, 143	HM Visuals 3 (12) HM Masters 3 (36)	
5. HM Book 3, p. 145	HM Masters 3 (39)	
6. HM Book 3, pp. 146, 157 In-Depth pp. 131, 135, 140, 147, 159	HM Masters 3 (37, 38)	

LEVEL D	Example
Multiplication and Division	**Multiplication and Division**
7. Uses the terms "product" and "factor" to describe or label the parts of a multiplication equation.	Write the word "factor" or "product" to label the problem. $8 = 4 \times 2$ product factor factor
8. Completes two multiplication statements which together illustrate the commutative principle for multiplication.	$4 \times 1 = \boxed{1} \times 4$
9. Solves one step word problems using multiplication or division facts through 5.	How many ears do three dogs have? 6 ears
10. In-Depth.	

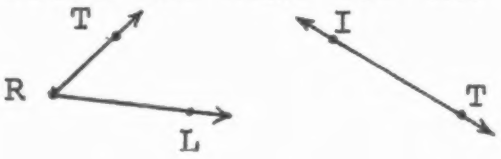
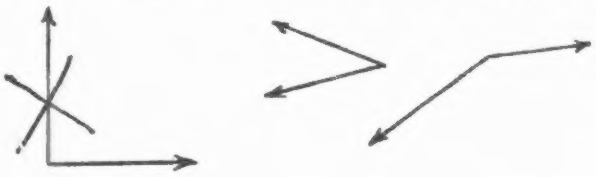
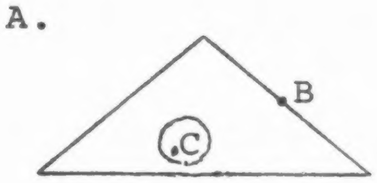
FRACTIONS	Fractions
	
1. Divides a set of identical objects into equivalent parts or identifies a set already divided and assigns a fractional number to compare one or more of the parts with the total set. Sets divided into 2, 3, 4, 5, 6 or 8 parts. Also states that a fractional number means "____ of ____ equal parts".	Circle two-thirds of the set. 
2. Shades an object or identifies a shaded object for 2, 3, 4, 5, 6 or 8 equivalent parts. Circles or writes the fraction which names the shaded or unshaded region.	Shade 3/4 of the square. 

Textual Resources	Related Resources	Notes
Multiplication and Division		
7. HM Book 3, pp. 127, 128	HM Visuals 3 (11)	
8.		
9. HM Book 3, pp. 139, 144, 149		
10. HM Book 3, pp. 186, 190-213, 216, 220,221, 252-277, 279, 282, 296, 297, 322-324, 326-341	HM Visuals 3 (18-21, 26) HM Masters 3 (49-56, 63-70, 71, 78-80)	
Fractions		
1. HM Book 3, pp. 160 - 162	HM Visuals 3 (13-16)	
2. HM Book 3, pp. 163, 164, 294, 295	HM Visuals 3 (13-16)	

LEVEL D Fractions	Example Fractions
3. Identifies a rational number for a given point on a number line.	Name the fractional number labeled M on the number line. 
4. Identifies an equivalent fraction for a given fraction, using pictures.	Write an equivalent fraction for the shaded part of the bar.  2/4 = $\boxed{1/2}$
5. Fills in the missing relation symbols to make a number sentence true (using pictures, rods, or number lines).	Write >, < or = in the ◯.  1/2 (<) 2/3
6. Adds two fractions with the same denominator in horizontal form with picture aids, number line or rods. Sums to 1.	Add  1/3 + 1/3 = $\boxed{2/3}$
7. In-Depth.	

NON-METRIC GEOMETRY	Non-Metric Geometry
 Review of Level C Skills C Non-Metric Geometry 1 C Non-Metric Geometry 2	
1. Identifies a ray as a part of a line that has one end point. Reads "$\overrightarrow{AB}$" as "ray AB". Reads "$\overleftrightarrow{AB}$" as "line AB".	Write the name for the ray.  $\overrightarrow{CM}$

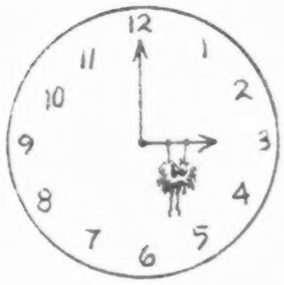
Textual Resources	Related Resources	Notes
Fractions		
3. HM Book 3, p. 165	HM Visuals 3 (13-16) HM Masters 3 (41)	
4. HM Book 3, pp. 168, 169	HM Masters 3 (43)	
5. HM Book 3, pp. 170, 171		
6. HM Book 3, pp. 172, 173	HM Masters 3 (44)	
7. HM Book 3, pp. 166, 167, 176, 177, 187	HM Visuals 3 (13-16) HM Masters 3 (42)	
Non-Metric Geometry		
Review		
HM Book 3, pp. 62,63	HM Visuals 3 (4)	
HM Book 3, p. 67	HM Masters 3 (19)	
1. HM Book 3, pp. 64, 65	HM Visuals 3 (4) HM Masters 3 (18)	

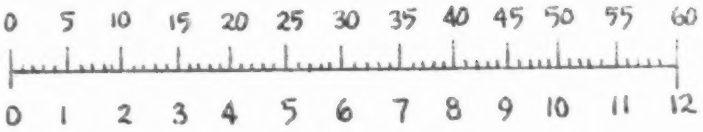
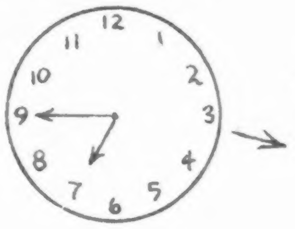
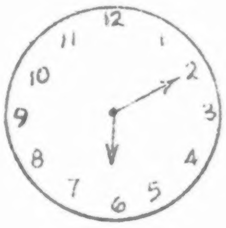
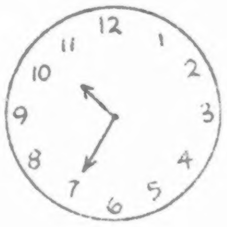
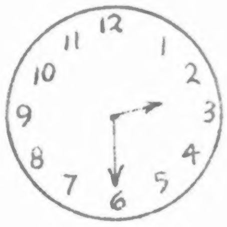
LEVEL D	Example
Non-Metric Geometry	Non-Metric Geometry
2. Identifies an angle as two rays with a common end point (vertex). Reads "∠TRL" as "angle TRL".	Write the name for the angle.  ∠TRL
3. Identifies a right angle as a special angle.	Draw an X on the right angle. 
4. Distinguishes between a set of points inside, outside or on a closed curve. Identifies part of a plane inside a simple closed curve as a specific region.	Draw a circle around the point that is in the triangular region. 
5. Identifies models or pictured representations of these solids: sphere, cylinder, cone, rectangular solid and cube. Responds to these words when used in directions.	When given the group of solids from the HM Manipulative Aids Kit, choose the sphere.
6. In-Depth.	

Textual Resources	Related Resources	Notes
Non-Metric Geometry		
2. HM Book 3, p. 74		
3. HM Book 3, pp. 75, 288, 289		
4. HM Book 3, pp. 86, 87	HM Visuals 3 (8) HM Masters 3 (24)	
5. HM Book 3, pp. 292, 293	HM Masters 3 (73)	
6. HM Book 3, pp. 66, 76, 77, 80-85, 88, 89, 91-93, 154, 155, 236-239, 284-287, 290, 291, 310, 311	HM Visuals 3 (6-8, 24, 27, 28) HM Masters 3 (21-23, 25, 61, 72)	

LEVEL D METRIC GEOMETRY	Example Metric Geometry
1. Measures lines and lengths of objects to the nearest 1/2 or 1/4 inch using a foot ruler. Lengths to 12 inches. Reads "m ($\overline{AB}$)" as "the measure of line segment AB".	Measure this line to the nearest 1/4 inch. ______ $1\frac{1}{4}$ inches
2. Uses conversion factors of : 1 foot = 12 inches, 3 feet = 36 inches = 1 yard, to solve problems which require such conversions. Limit of 5 yards. Teacher note: Use repeated addition for solutions.	Solve the problem. 2 yards = 6 feet
3. Uses the equivalent measures of: 2 cups = 1 pint, 2 pints = 1 quart and 4 quarts = 1 gallon, to solve problems which require such conversions. Limit of 2 gallons.	Solve the problem. 1 quart + 2 pints = 4 pints
4. Solves verbal problems which require knowledge of equivalent measures: cups, pints, quarts, gallons, inches, feet, yards.	
*5. Uses a scale to read own weight in pounds.	

Textual Resources	Related Resources	Notes
Metric Geometry		
1. HM Book 3, pp. 68-71	HM Visuals 3 (5) HM Masters 3 (20)	
2. HM Book 3, pp. 72, 214, 215	HM Masters 3 (57)	
3. HM Book 3, p. 175		
4. HM Book 3, p. 73		
5.		



LEVEL D TIME	Example Time
*1. Uses a number line and clockface to count by 5 minute intervals.	 0 5 10 15 20 25 30 35 40 45 50 55 60 0 1 2 3 4 5 6 7 8 9 10 11 12
2. Matches clockfaces with given time statements. Times stated in 5 minute intervals. Uses the words, "minutes past", "to" and "o'clock".	Match the clockface with the correct time.  35 minutes past nine o'clock 15 minutes to seven o'clock
3. Supplies the hour and minute hand or draws both hands to show a given time on a clockface. Times to be stated in 5 minute intervals. Uses the words, "minutes past", "to" and "o'clock".	Draw in the hands to make the clockface read: 10 minutes past six o'clock. 
4. States the specified time in words as both ____ minutes past the hour and ______ minutes to the hour when given a clockface.	This clockface shows the time to be both: 35 minutes past 10 o'clock or 25 minutes to 11 o'clock. 
5. Writes time in "time notation" by 5 minute intervals when given a clockface.	Write the time shown on the clockface. 2 : 30 

Textual Resources	Related Resources	Notes
Time		
1.		
2.		
3.		
4. HM Book 3, p. 150		
5. HM Book 3, pp. 151, 152		

LEVEL D

Time

*6. Practices telling time through the use of verbal (word) problems.

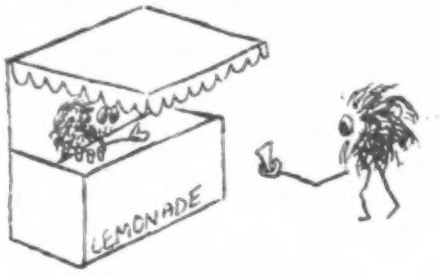
*7. Tells time by minute intervals. No mastery test until Level E.

8. In-Depth.

Example

Time

MONEY



Money

Review of Level C Skills

C Money 1

1. Identifies the dollar and responds to the use of the dollar sign ($). Finds the value of a dollar or more in other coins.

Write the numerals to complete the chart.

cents	$	10¢	1¢
268	2	6	8
137	1	3	7

2. Writes money values, up to $9.99, using words "dollar" and "cents" or signs $,¢. Writes money values in sums of dollars, dimes and pennies or parts of dollars.

Write this amount of money using the $ sign and the point.

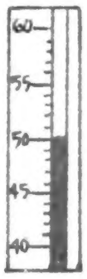
two dollars and seventeen cents $2.17

3. Adds and subtracts money values in vertical form, using $ and ¢ signs.

Add or subtract.

$$\begin{array}{r} \$\ 72 \\ +19 \\ \hline \$\ 91 \end{array} \qquad \begin{array}{r} 61¢ \\ -23 \\ \hline 38¢ \end{array}$$

Textual Resources	Related Resources	Notes
Time		
6. HM Book 3, p. 153	HM Masters 3 (40)	
7.		
8. HM Book 3, p. 251		
Money		
Review		
HM Book 3, pp. 14-16		
1. HM Book 3, pp. 17, 22	HM Masters 3 (5)	
2. HM Book 3, pp. 22, 278		
3. HM Book 3, pp. 246, 248 In-Depth p. 247		

LEVEL D	Example
Money	Money
4. Solves one and two step verbal and non-verbal problems involving skills learned to this point.	
5. Identifies the change in coins which would be received in making purchases. No mastery test until Level E.	
SPECIAL TOPICS 	Special Topics
1. Writes Roman numerals for numbers one through twelve.	Write the Roman numerals for these numbers. 2 II 8 VIII
2. Reads a thermometer and records temperatures using the degree (°) symbol. No temperatures below zero.	Write the temperature shown on the picture of the thermometer. 
3. Uses coordinate pairs to read a simple bar graph.	Read the bar graph and answer the following question. a. Who made the highest score on the test?

Textual Resources	Related Resources	Notes
Money		
4. HM Book 3, pp. 23, 148 In-Depth p. 280		
5. HM Book 3, teacher's page 315		

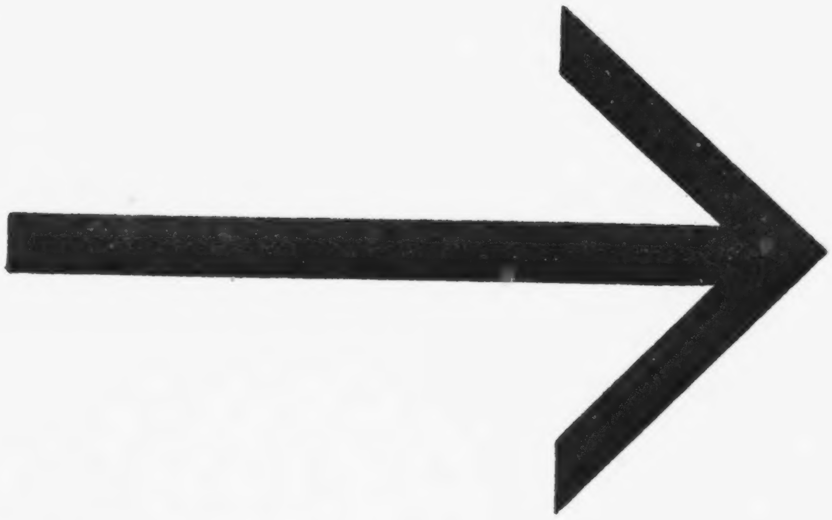
Special Topics		
1. HM Book 3, p. 251		
2.		
3. HM Book 3, pp. 298-304 In-Depth pp. 306, 307	HM Masters 3 (74-76)	

LEVEL D

TESTS

and

ANSWER KEYS



LEVEL D Name ____________________

NUMERATION Date ____________________

Skill 1

Fill in the missing numbers.

1) 372, 373, ____, ____, ____, 377, ____, ____

2) 941, 940, ____, ____, ____, ____, ____, 934

3) ____, 740, 741, ____, ____, ____, ____, 746

4) 401, ____, ____, ____, ____, 396, 395

5) 736, 735, ____, 733, ____, ____, ____, ____

Write the number that comes before, after, or between for each of the following:

1) ____, 670

2) ____, 500

3) 799, ____

4) 397, ____

5) 489, ____, 491

LEVEL D

NUMERATION

Skill 2

Name ____________________

Date ____________________

Fill in the missing numbers.

1) 30, 40, ____, ____, 70, ____, ____, ____

2) 220, 210, 200, ____, ____, ____, ____, 150

3) 540, 550, ____, ____, ____, ____, 600, ____

4) ____, 690, 685, ____, ____, ____, ____, 660

5) 815, ____, ____, ____, ____, 840, 845

6) 115, 120, 125, ____, ____, ____, 145, ____

7) 393, 395, 397, ____, ____, ____, 405, ____

8) 849, 847, ____, ____, ____, ____, 837, ____

9) 972, ____, 976, 978, ____, ____, ____, 986

10. 426, 424, ____, ____, ____, ____, 414, ____

LEVEL D Name ____________________

NUMERATION Date ____________________

Skill 3

Fill the blanks to show the place value of each digit.

1) 486 = ____ hundreds + ____ ones + ____ tens

2) 907 = ____ tens + ____ hundreds + ____ ones

3) Circle the digit in the hundreds place. 706

4) Circle the digit in the tens place. 819

Write the total value in short form.

5) 2000 + 70 + 500 + 2 = ____________

6) 700 + 3000 + 6 = __________

Write these numbers in expanded notation.

7) 2432 = ____

8) 9038 = ____

Write the numerals for these number words.

9) five thousand, two hundred forty-five ______________

10) two thousand, seven ________________

LEVEL D

NUMERATION

Skill 4

Name ______________________________

Date ______________________________

Put an > , < , or = in the ○ to make a true statement.

1) 419 ○ 491

2) 199 ○ 199

3) 996 ○ 696

4) 313 ○ 131

5) 846 ○ 964

6) 260 ○ 260

7) 286 ○ 368

8) 39 ○ 49

9) 730 ○ 703

10) 585 ○ 585

LEVEL D　　Name ______________________

ADDITION AND SUBTRACTION　　Date ______________________

Skill 1, 2, 3, 4

Label the parts using the words "sum" or "addend".

```
 6   __________
+3   __________
——
 9   __________
```

13 = 2 + 3 + 8

Find the missing addend.

☐ + 6 + 3 = 18

6 + 7 + ☐ = 14

```
 7
 ☐
+8
——
15
```

Add or Subtract.

```
 51      28      93      88      61
-31     +68     -19     -59     +19
———     ———     ———     ———     ———
```

LEVEL D

Name ______________________________

ADDITION AND SUBTRACTION

Date ______________________________

Skill 5, 6, 7

Add or Subtract.

384	512	781	897	456
+514	+321	-230	-262	-212

Add.

274	389	653	887	332	302
+275	+430	+129	+92	146	161
				+209	+255

Subtract.

791	451	522	481
-286	-170	-191	-237

LEVEL D

Name ____________________

ADDITION AND SUBTRACTION

Date ____________________

Skill 8

Solve the problems.

1. Jack has 8 boats and his brother has 6. How many more boats has Jack? ______ boats

2. In a big tank there were 7 small tadpoles and 8 large ones. How many tadpoles were there? _______ tadpoles

3. Ruth and Liz scored 80 points together. Betty scored 40 points. What was the total score for the three girls? _________ points

4. If you had 46 football cards and collected 22 more, how many football cards would you have in all? _______ football cards

5. Shirley's favorite television show is 45 minutes long. If 28 minutes have passed, how many minutes are left? ______ minutes.

LEVEL D

Name ____________________

ADDITION AND SUBTRACTION

Date ____________________

Skill 9

Write $>$, $<$, or $=$ in each ○.

1) 3 + 9 ○ 8 + 4
2) 15 ○ 7 +8
3) 64 ○ 46
4) 14 - 6 ○ 10 + 2
5) 2 ○ 8 , so 42 ○ 48

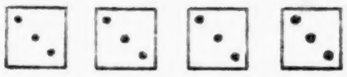
LEVEL D   Name ____________________

MULTIPLICATION AND DIVISION   Date ____________________

Skill 1, 2 (Page 1 of 2 pages)

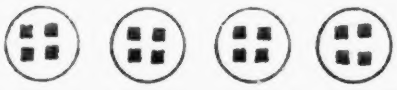
Write a numeral in the ☐ to complete the statements.

1.



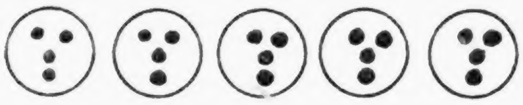
4 sets of 3 = ☐   4 x 3 = ☐

2.



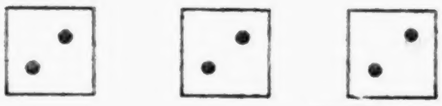
4 sets of 4 = ☐   4 x 4 = ☐

3.



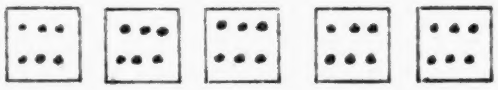
5 sets of 4 = ☐   5 x 4 = ☐

4.



3 sets of 2 = ☐   3 x 2 = ☐

5.



5 sets of 6 = ☐   5 x 6 = ☐

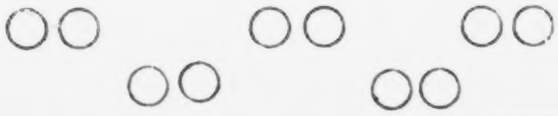
LEVEL D   Name ____________________

MULTIPLICATION AND DIVISION   Date ____________________

Skill 1, 2 (Page 2 of 2 pages)

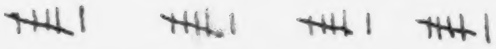
Complete each equation.

6.



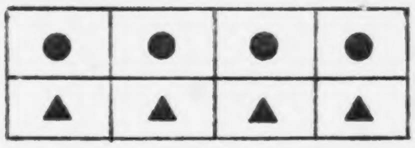
2 + 2 + 2 + 2 + 2 = ☐   5 x 2 = ☐

7.



6 + 6 + 6 + 6 = ☐   4 x 6 = ☐

8.



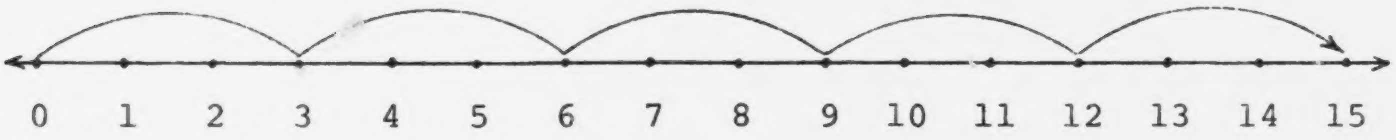
= 4

= +4

☐

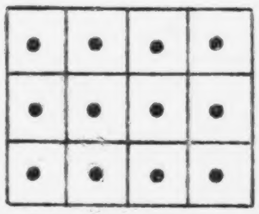
4 x 2 = ☐

9.


0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

3 + 3 + 3 + 3 + 3 = ☐   5 x 3 = ☐

10.



4

4

+ 4

☐

4 x 3 = ☐

LEVEL D

Name ____________________

MULTIPLICATION AND DIVISION

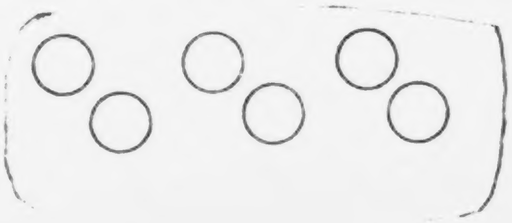
Date ____________________

Skill 3, 4 (Page 1 of 2 pages)

Draw a ring around the subsets.

Put the numeral in the ☐.

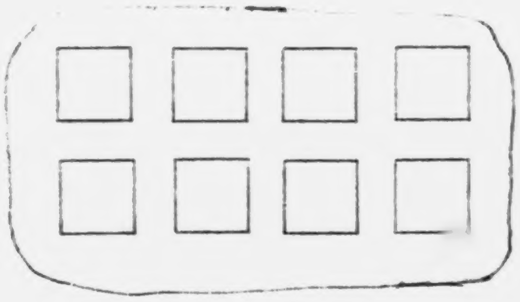
1.



6 = ☐ sets of 2

6 ÷ 2 = ☐, so ☐ x 2 = 6

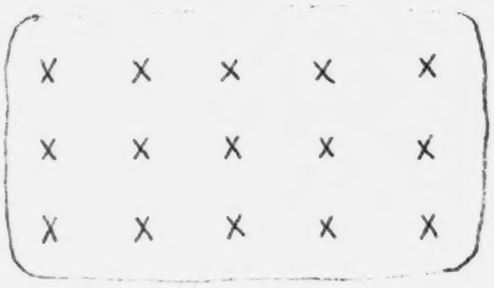
2.



8 = ☐ sets of 4

8 ÷ 4 = ☐, so ☐ x 4 = 8

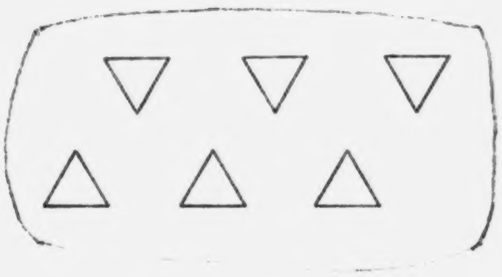
3.



15 = ☐ sets of 5

15 ÷ 5 = ☐, so ☐ x 5 = 15

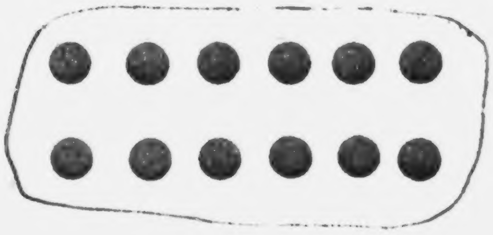
4.



6 = ☐ sets of 3

6 ÷ 3 = ☐, so ☐ x 3 = 6

5.



12 = ☐ sets of 4

12 ÷ 4 = ☐, so ☐ x 4 = 12

LEVEL D

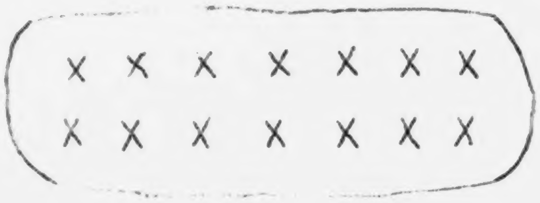
MULTIPLICATION AND DIVISION

Skill 3, 4 (Page 2 of 2 pages)

Name ______________________________

Date ______________________________

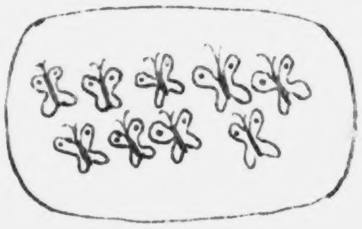
6.



14 = ☐ sets of 7

14 ÷ 7 = ☐, so ☐ x 7 = 14

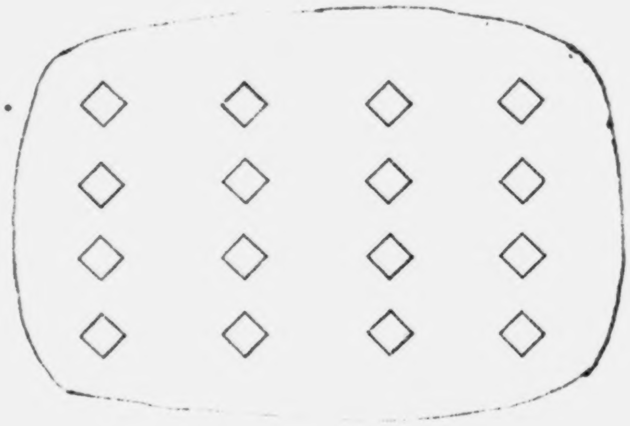
7.



9 = ☐ sets of 3

9 ÷ 3 = ☐, so ☐ x 3 = 9

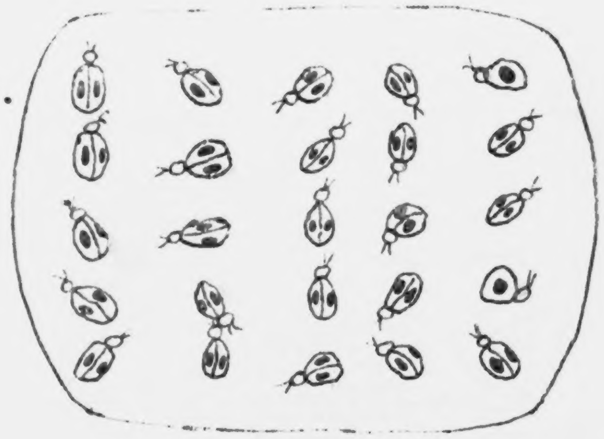
8.



16 = ☐ sets of 4

16 ÷ 4 = ☐, so ☐ x 4 = 16

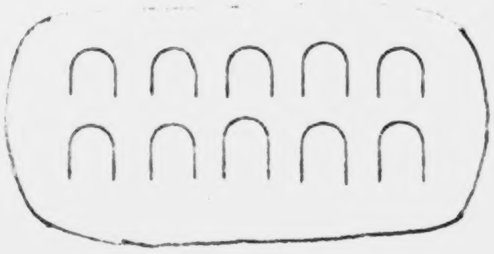
9.



25 = ☐ sets of 5

25 ÷ 5 = ☐, so ☐ x 5 = 25

10.



10 = ☐ sets of 2

10 ÷ 2 = ☐, so ☐ x 2 = 10

LEVEL D

MULTIPLICATION AND DIVISION

Skill 5

Name ____________________

Date ____________________

Solve the equations.

$3 \times 0 = \square$	$0 \times 3 = \square$	$0 \div 3 = \square$	$4 \times 0 = \square$
$0 \times 4 = \square$	$0 \div 4 = \square$	$8 \times 1 = \square$	$1 \times 8 = \square$
$8 \times 0 = \square$	$8 \div 1 = \square$	$5 \times 1 = \square$	$1 \times 5 = \square$
$1 \times 6 = \square$	$6 \times 1 = \square$	$0 \div 6 = \square$	$6 \div 1 = \square$
$7 \times 1 = \square$	$0 \times 7 = \square$	$7 \div 1 = \square$	$2 \times 1 = \square$

LEVEL D

MULTIPLICATION AND DIVISION

Skill 7

Name ____________________

Date ____________________

Label the parts.

a) 5 $\longrightarrow$ a) ____________________

b) x4 $\longrightarrow$ b) ____________________

c) $\overline{20}$ $\longrightarrow$ c) ____________________

a) b) c)

20 = 5 x 4

a) ____________________

b) ____________________

c) ____________________

LEVEL D

MULTIPLICATION AND DIVISION

Skill 8

Name ______________________

Date ______________________

Put the numeral in the ☐ .

1. 5 x 6 = ☐
   ☐ x 5 = 30

2. 4 x 8 = ☐
   8 x ☐ = 32

3. 7 x 3 = ☐
   ☐ x 7 = 21

4. 9 x 5 = ☐
   ☐ x 9 = 45

5. 8 x 5 = ☐
   5 x ☐ = 40

6. 6 x 4 = ☐
   ☐ x 6 = 24

7. 9 x 3 = 3 x ☐

8. 2 x 8 = ☐ x 2

9. 4 x 8 = 8 x ☐

10. 7 x 4 = ☐ x 7

LEVEL D

MULTIPLICATION AND DIVISION

Skill 9 (Page 1 of 2 pages)

Name ______________________

Date ______________________

Solve these problems. Label.

1. Each of 5 cats had 5 kittens. Five sets of 5 kittens make how many kittens?

____

2. How many legs do 4 kittens have?

____

3. Four girls each had 3 dolls. How many dolls did they have in all?

____

4. How many packs of gum will 30¢ buy, if each pack cost 5¢?

____

5. There are 3 birds in each of the 6 bird cages in the pet shop. How many birds are there in all?

____

LEVEL D

MULTIPLICATION AND DIVISION

Skill 9 (Page 2 of 2 pages)

Name ______________________________

Date ______________________________

6. There are 7 rooms in the house. There are 4 windows in each room. How many windows are there in the house?

____

7. The boys have a total of 36 baseball cards. Each of the 4 boys has the same number of baseball cards. How many cards does each boy have?

____

8. There are 9 girls in the club. If each girl bakes 4 cakes for the cake sale, how many cakes will the club have for the sale?

____

9. The girls had 40 cookies. They put 4 cookies in each box. How many boxes did they use?

____

10. Each of 8 boys had 4 model cars. How many cars did they have in all?

____

LEVEL D　　　　　　　　　　　　Name ______________________

FRACTIONS　　　　　　　　　　　Date ______________________

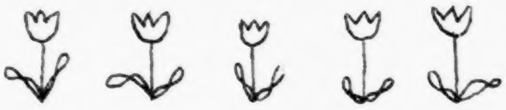
Skill 1

Write the fraction to compare the number of shaded balls with the total number of balls.

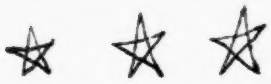
1. ● ● ○ ○ ○ ______　　　2. ● ● ● ○ ○ ○ ______

3. ● ○ ○ ○ ______　　　4. ○ ● ______

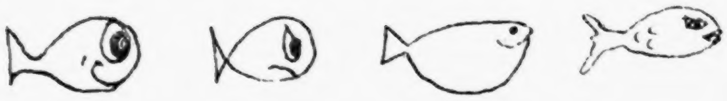
5. Circle $\frac{2}{5}$ of the set.



6. Circle $\frac{1}{3}$ of the set.



7. Circle $\frac{2}{4}$ of the set.



8. Circle $\frac{3}{8}$ of the set. ○ ○ ○ ○ ○ ○ ○ ○

9. $\frac{2}{4}$ means __________ of __________ equal parts.

10. $\frac{1}{3}$ means __________ of __________ equal parts.

LEVEL D

FRACTIONS

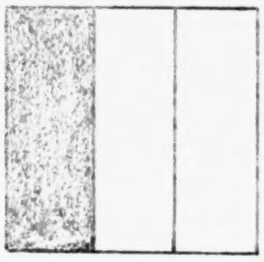
Skill 2

Name ____________________

Date ____________________

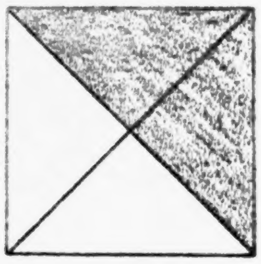
Write the fraction for: a. the shaded region

b. the unshaded region



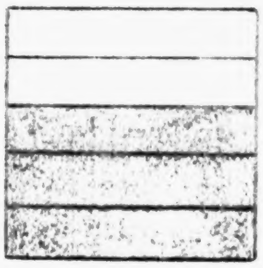
a._____

b._____



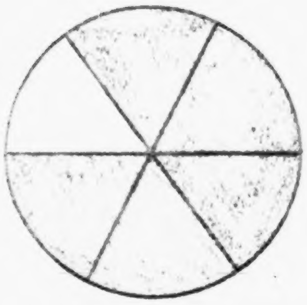
a._____

b._____



a._____

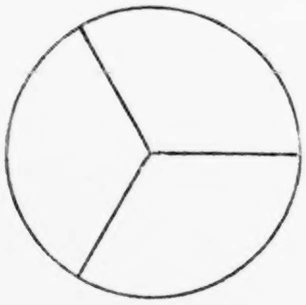
b._____



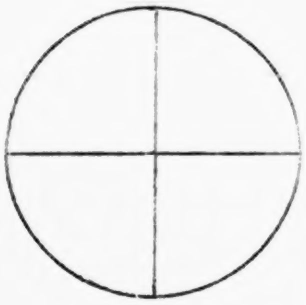
a._____

b._____

Shade $\frac{2}{3}$ of the circle



Shade $\frac{2}{4}$ of the circle

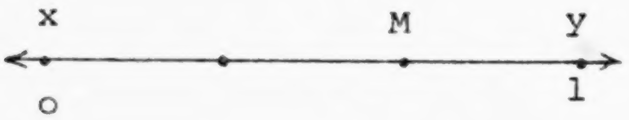


LEVEL D Name ____________________

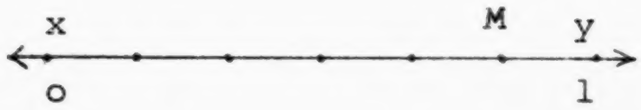
FRACTIONS Date ____________________

Skill 3

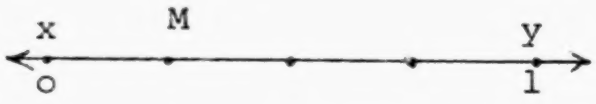
Name the fractional number labeled M on the number line.



____



____



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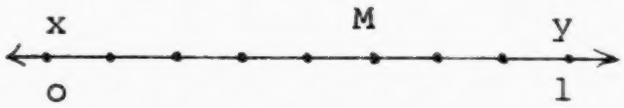
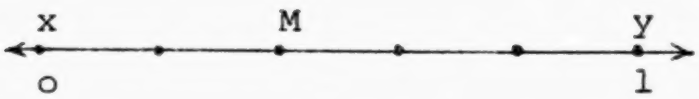


____



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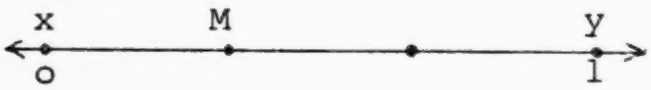

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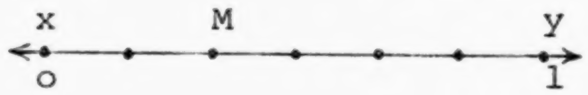

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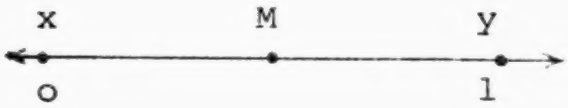

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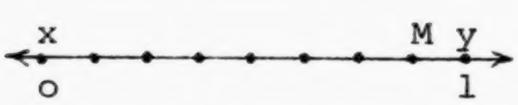
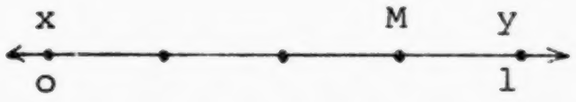


____



____

LEVEL D

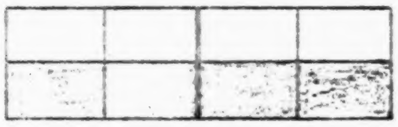
FRACTIONS

Skill 4

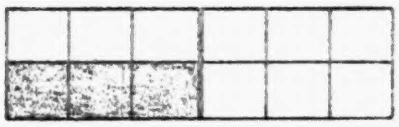
Name ______________________

Date ______________________

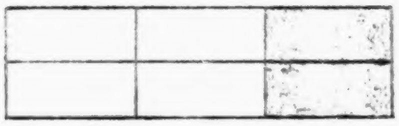
Write an equivalent fraction for the shaded part of each bar.



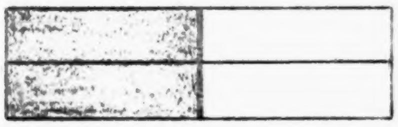
$\frac{4}{8} = \square$



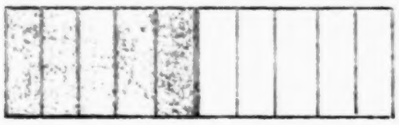
$\frac{3}{12} = \square$



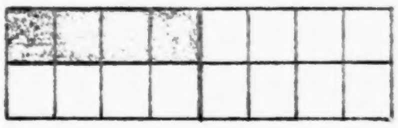
$\frac{2}{6} = \square$



$\frac{2}{4} = \square$

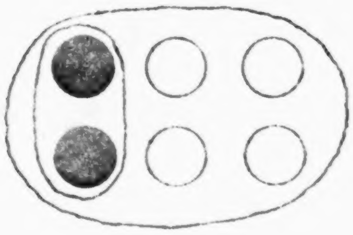


$\frac{5}{10} = \square$

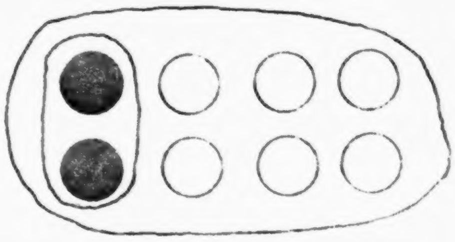


$\frac{1}{4} = \square$

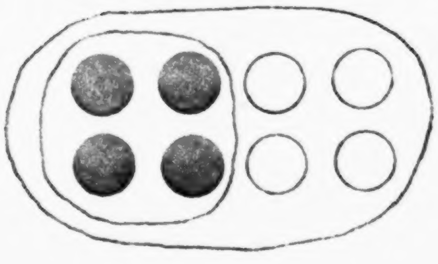
Name the fractional numbers shown by the shaded subsets.



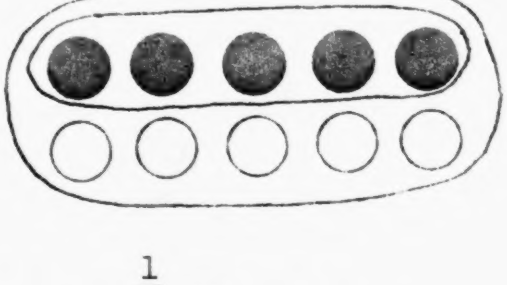
$\frac{1}{3}$ or ________



$\frac{1}{4}$ or ________



$\frac{1}{2}$ or ________



$\frac{1}{2}$ or ________

LEVEL D

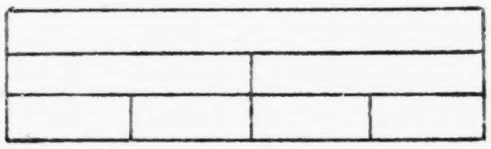
FRACTIONS

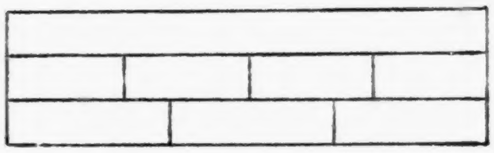
Skill 5

Name ____________________

Date ____________________

Write >, < , or = in the ○.



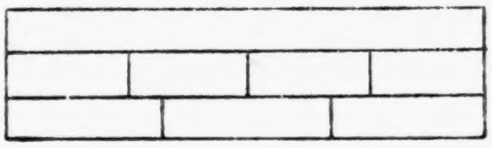


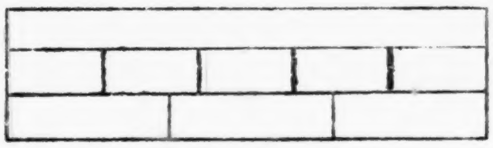
1. $\frac{1}{4}$ ○ $\frac{1}{2}$

2. $\frac{1}{2}$ ○ $\frac{1}{4}$

3. $\frac{1}{3}$ ○ $\frac{1}{4}$

4. $\frac{1}{4}$ ○ $\frac{1}{3}$



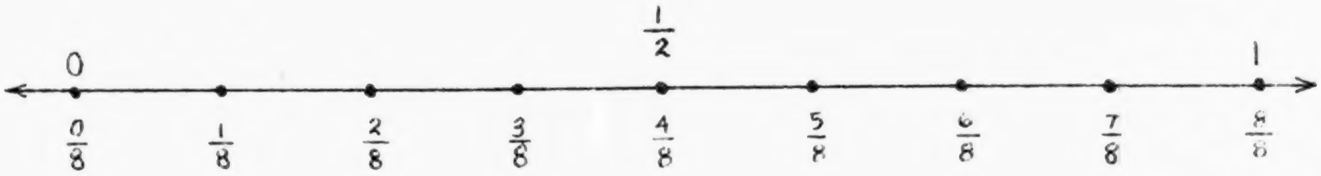


5. $\frac{2}{3}$ ○ $\frac{3}{4}$

6. $\frac{3}{4}$ ○ $\frac{2}{3}$

7. $\frac{4}{5}$ ○ $\frac{2}{3}$

8. $\frac{2}{3}$ ○ $\frac{4}{5}$



9. $\frac{6}{8}$ is to the left of $\frac{7}{8}$, so $\frac{6}{8}$ ○ $\frac{7}{8}$

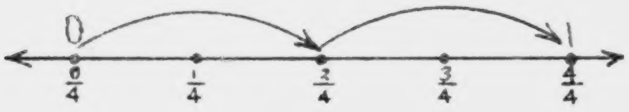
10. $\frac{4}{8}$ is at the same place as $\frac{1}{2}$, so $\frac{4}{8}$ ○ $\frac{1}{2}$

LEVEL D Name ______________________________

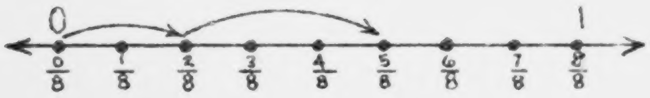
FRACTIONS Date ______________________________

Skill 6

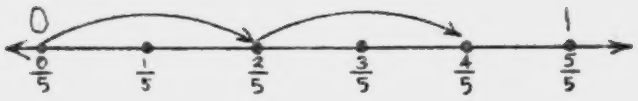
Study the number lines and complete the equations.


0
1
$\frac{0}{4}$
$\frac{1}{4}$
$\frac{2}{4}$
$\frac{3}{4}$
$\frac{4}{4}$

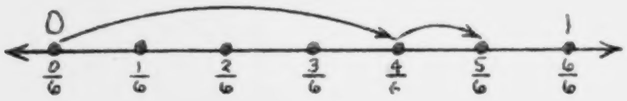
1. $\frac{2}{4} + \frac{2}{4} =$ _____ or _____


0
1
$\frac{0}{8}$
$\frac{1}{8}$
$\frac{2}{8}$
$\frac{3}{8}$
$\frac{4}{8}$
$\frac{5}{8}$
$\frac{6}{8}$
$\frac{7}{8}$
$\frac{8}{8}$

2. $\frac{2}{8} + \frac{3}{8} =$ _____

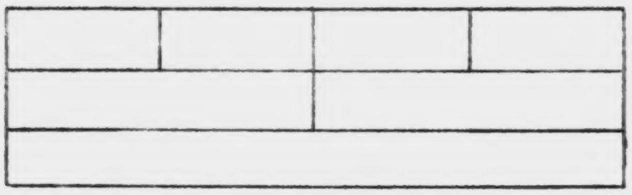

0
1
$\frac{0}{5}$
$\frac{1}{5}$
$\frac{2}{5}$
$\frac{3}{5}$
$\frac{4}{5}$
$\frac{5}{5}$

3. $\frac{2}{5} + \frac{2}{5} =$ _____


0
1
$\frac{0}{6}$
$\frac{1}{6}$
$\frac{2}{6}$
$\frac{3}{6}$
$\frac{4}{6}$
$\frac{5}{6}$
$\frac{6}{6}$

4. $\frac{4}{6} + \frac{1}{6} =$ _____

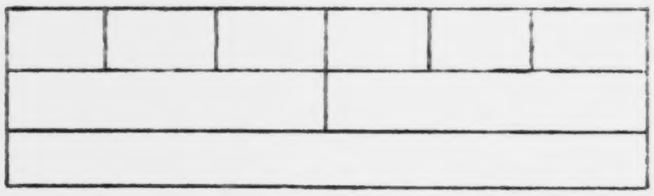
Study the rods and complete the equations.



$\frac{1}{4} + \frac{3}{4} =$ _____ or _____

$\frac{2}{4} + \frac{2}{4} =$ _____ or _____

$\frac{1}{2} + \frac{1}{2} =$ _____ or _____



$\frac{1}{6} + \frac{5}{6} =$ _____ or _____

$\frac{3}{6} + \frac{3}{6} =$ _____ or _____

$\frac{1}{2} + \frac{1}{2} =$ _____ or _____

LEVEL D

NON-METRIC GEOMETRY

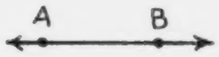
Skill 1, 2

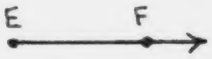
Name ______________________

Date ______________________

Write the name for each ray.

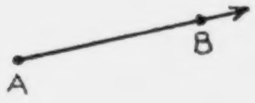
1.

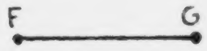




1. __________

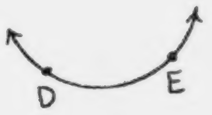
2.

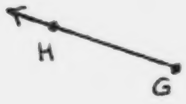




2. __________

3.





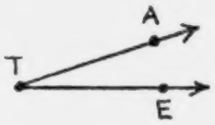
3. __________

4. This symbol •⟶ means __________.

5. This symbol ⟷ means __________.

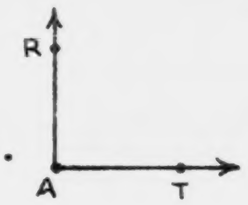
Write the name for each angle.

6.



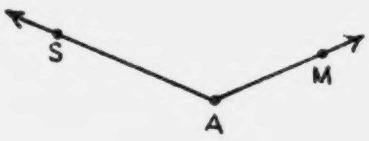
____

7.



____

8. Name the two rays that make up this angle.



______ ______

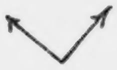
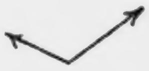
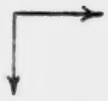
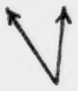
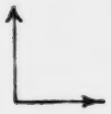
9. The symbol ∠ means __________.

LEVEL D　　　　　　　　　　　　Name ______________________

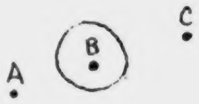
NON-METRIC GEOMETRY　　　　　　Date ______________________

Skill 3, 4

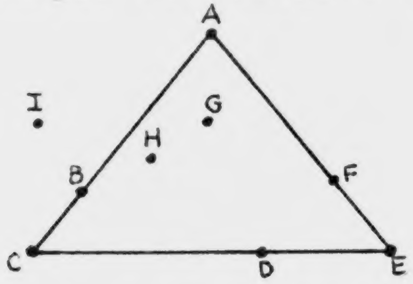
1. Circle the right angles.

2. Put an X on the point that is in the circular region.



Use this triangle to answer 3 through 7.



3. Name the points on the triangle. ______________

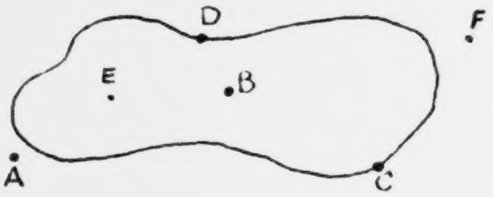
4. Name the points in the triangular region. ________

5. Name the corner points of the triangle. ________

6. Join G and H. Is all of GH inside the curve? _____

7. Name the point outside of the curve. ________

Use this curve to answer 8 through 10.



8. Name the points which are inside the curve. ______

9. Name the points which are on the curve. ______

10. Name the points which are outside the curve. ______

LEVEL D

NON-METRIC GEOMETRY

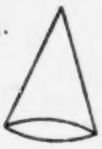
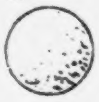
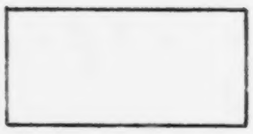
Skill 5

Name ____________________

Date ____________________

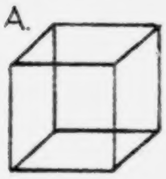
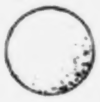
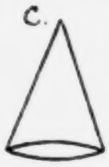
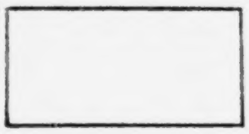
1. Select the picture of a sphere.

1. ____________

A.

B.

C.


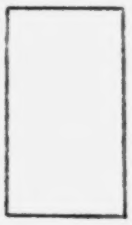
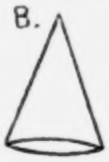
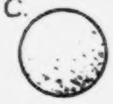
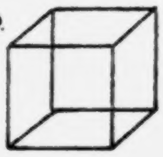
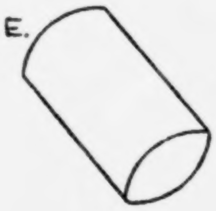
2. Select the picture of a cube.

2. ____________

A.

B.

C.

D.


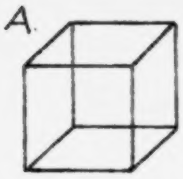
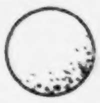
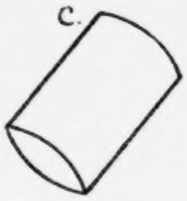
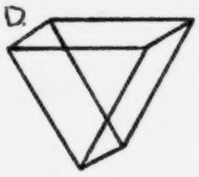
3. Select the picture of a cone.

3. ____________

A.

B.

C.

D.

E.


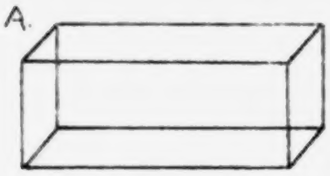
4. Select the picture of a cylinder.

4. ____________

A.

B.

C.

D.


5. Select the picture of a rectangular solid.

5. ____________

A.

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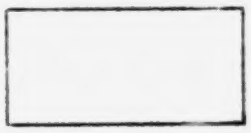
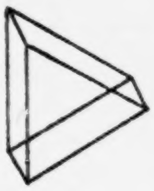
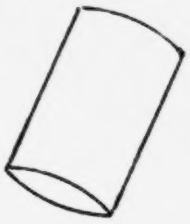
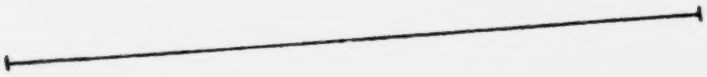

C.

D.


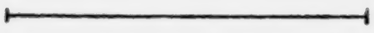
LEVEL D — Name ______________________

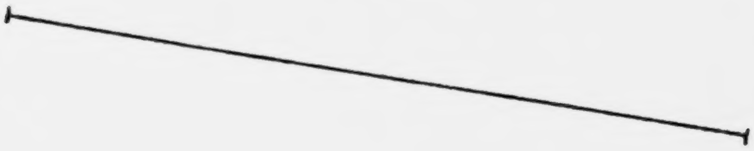
METRIC GEOMETRY — Date ______________________

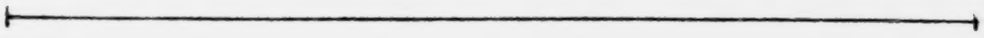
Skill 1 (Page 1 of 2 pages)

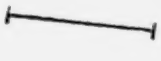
Measure these lines to the nearest $\frac{1}{2}$ inch. Label.

1.  1. __________

2.  2. __________

3.  3. __________

4.  4. __________

5.  5. __________

LEVEL D

METRIC GEOMETRY

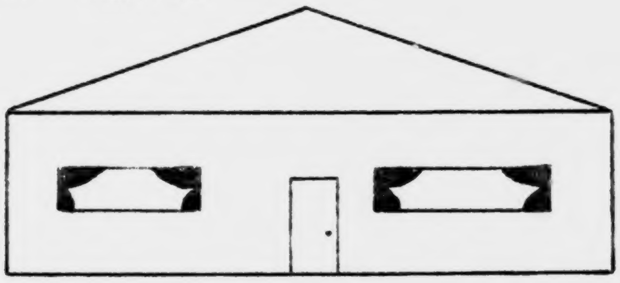
Name ____________________

Date ____________________

Skill 1 (Page 2 of 2 pages)

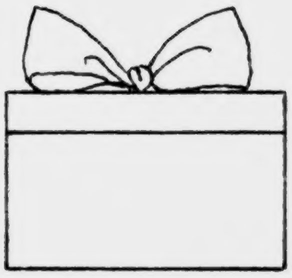
Use a foot ruler to measure the length of the following to the nearest 1/4 inch. Label.

1.



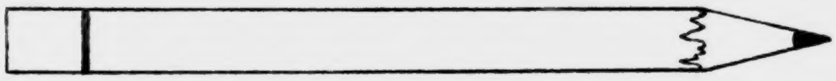
1. __________

2.



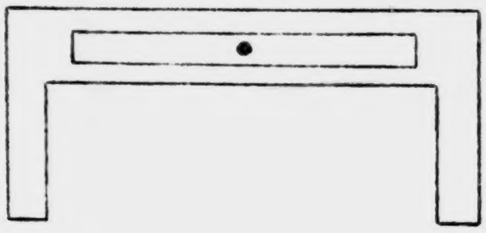
2. __________

3.



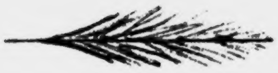
3. __________

4.



4. __________

5.



5. __________

LEVEL D   Name ______________________________

METRIC GEOMETRY   Date ______________________________

Skill 2

Solve the problems.

1. 1 foot + 6 inches =   1. __________ inches

2. 1 yard - 2 feet =   2. __________ feet

3. 2 feet + 4 inches =   3. __________ inches

4. 6 feet + 3 feet =   4. __________ yards

5. 1 yard + 11 inches =   5. __________ inches

6. 3 feet + 12 inches =   6. __________ feet

7. 1 foot - 10 inches =   7. __________ inches

8. 1 yard - 12 inches =   8. __________ feet

9. 2 yards + 6 feet =   9. __________ yards

10. 3 yards - 36 inches =   10. __________ yards

LEVEL D

METRIC GEOMETRY

Skill 3, 4

Name ______________________

Date ______________________

Solve the problems.

1. 1 quart + 2 pints = 1.__________ pints
2. 1 gallon - 2 quarts = 2.__________ quarts
3. 4 cups + 1 pint = 3.__________ cups
4. 5 quarts + 3 quarts = 4.__________gallons
5. 2 gallons + 3 quarts = 5.__________ quarts

6. Sally is selling orange juice for 10¢ a cup. What does a quart of orange juice cost?

6.________________

7. Tom drinks a quart of milk each day. He drank 2 cups today. He needs to drink _______ more cups of milk.

8. Susan needs a gallon of ice cream for a party. She has one quart. Susan needs _____ more quarts of ice cream.

9. If each of 6 boys at a birthday party drinks a pint of orange soda, how many quart bottles will be needed? ________________

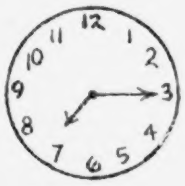
10. Sue bought 2 yards of red material, 2 feet of green and 12 inches of white. She bought _____ yards of material.

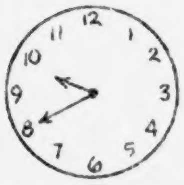
LEVEL D   Name ______________________________

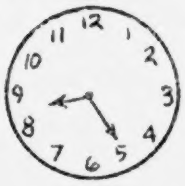
TIME   Date ______________________________

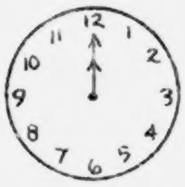
Skill 2, 3,

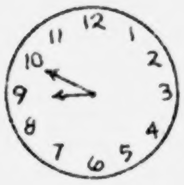
Read the time shown on each clock. Fill in the missing word.

1.  quarter past 7 __________

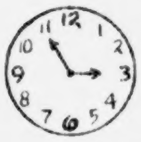
2.  _____ minutes to _____ o'clock

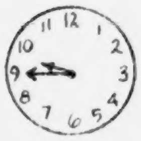
3.  25 minutes _____ 8 ________

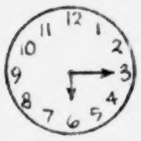
4.  _____ o'clock

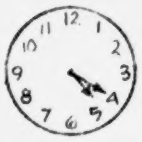
5.  _____ minutes _____ 9 o'clock

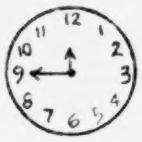
Match the clockfaces with the time statements.

6.  quarter past 6 o'clock

7.  45 minutes past 9 o'clock

8.  5 minutes to 3 o'clock

9.  quarter to 12 o'clock

10.  20 minutes past 4 o'clock

LEVEL D

TIME

Skill 4, 5

Name ______________________

Date ______________________

Make the clock tell the time.

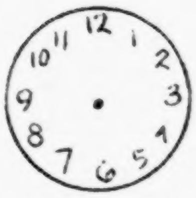
1.

8:15

2.

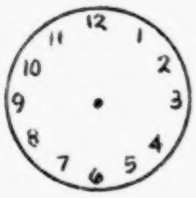
7:35

3.



9:40

4.



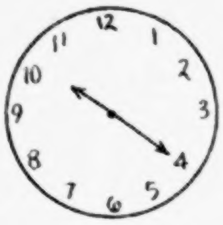
1:05

5.

10:55

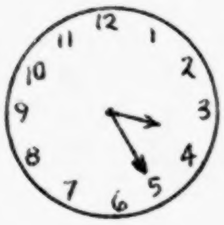
Write the time shown on each clock in time notation.

6.



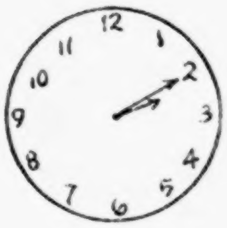
______

7.



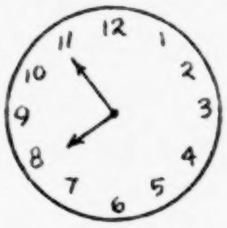
______

8.



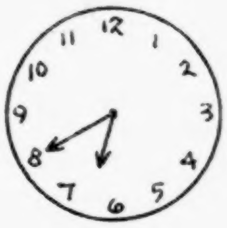
______

9.



______

10.



______

LEVEL D

MONEY

Skill 1

Name ______________________________

Date ______________________________

1. The value of a dollar is __________ cents.

2. The value of 136¢ is _____ dollar, _____ cents, _____dimes.

3. How many cents in 2 dollars, 2 dimes and 4 pennies? _____________

4. How many cents in 1 dollar, 3 dimes and 6 pennies? ______________

5. Complete the chart.

cents	$	10¢	1¢
236	2		
	4	5	6
39	0		
167	1	6	
98		9	8
642	6		

LEVEL D

MONEY

Skill 2

Name ______________________

Date ______________________

Write the amount of money using the $ sign and the point.

1. four dollars and seventeen cents ______________

2. six dollars and fifteen cents ______________

3. three hundred forty-seven cents ______________

4. two dollars and ten cents ______________

5. seven dollars and fifty cents ______________

Complete the chart.

Dollars	Dimes	Cents	Using $ and .
9	9		$9.97
4	7	6	
5		2	$5.32
	6	8	$8.68
7	5	3	

LEVEL D

MONEY

Skill 3

Name ______________________

Date ______________________

Name the sums.

$ 68	76¢	$ 42	83¢	$ 54
+53	+82	+57	+29	+66
$	¢	$	¢	$

Name the missing amounts.

$ 57	81¢	$ 33	$17	71¢
-38	- 24	-16	- 9	- 27
$	¢	$	$	¢

LEVEL D

MONEY

Skill 4

Name ______________________

Date ______________________

1. Balloons cost 5 for 25¢. What does one balloon cost? __________¢

2. Pencils cost 4¢ each. How much will 6 pencils cost? __________¢

3. Jane saved 3 dollars, 5 dimes and 8 pennies. How many cents was this.

3. ______________¢

4. How much for 1 can of peaches if 3 cans cost 99¢? __________¢

5. Nancy bought a dress for $5.98 and a blouse for $3.50. How much did Nancy spend?

5. $______________

LEVEL D

SPECIAL TOPICS

Skill 1

Name ____________________

Date ____________________

Write the Roman numerals for the following.

6 = _____

10 = _____

3 = _____

4 = _____

7 = _____

5 = _____

Write these Roman numerals in our kind of numerals.

VIII = _____

XII = _____

II=_____

IX = _____

LEVEL D

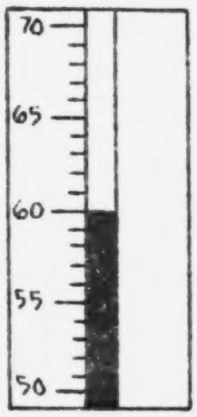
SPECIAL TOPICS

Skill 2

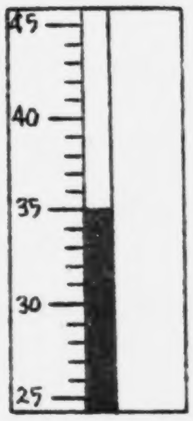
Name ____________________

Date ____________________

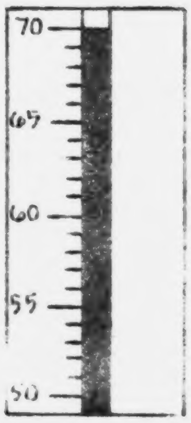
Write the temperature shown on the picture of the thermometer. Use the degree (°) symbol.


70
65
60
55
50

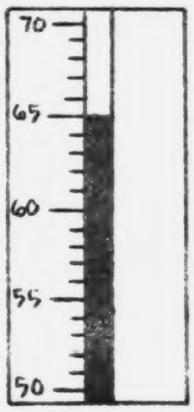
1. _____


45
40
35
30
25

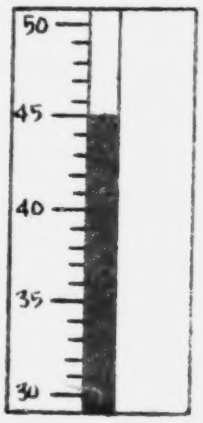
2. _____


70
65
60
55
50

3. _____


70
65
60
55
50

4. _____


50
45
40
35
30

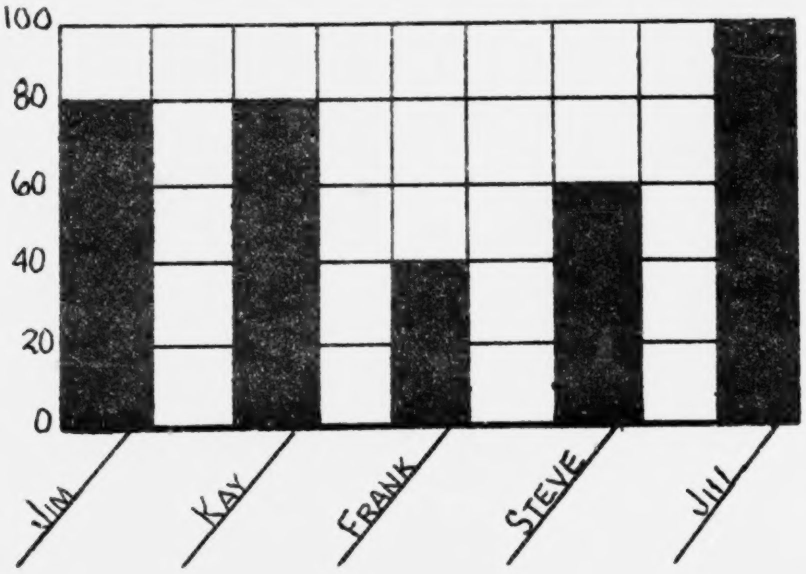
5. _____

LEVEL D Name ______________________

SPECIAL TOPICS Date ______________________

Skill 3

Read the bar graph and answer the following questions.



1. Who made the highest score on the test? 1. ______________

2. Who made the lowest score on the test? 2. ______________

3. What was Jim's score? 3. ______________

4. Who made the score of 60? 4. ______________

5. How much higher was Kay's score than Frank's? 5. ______________

LEVEL D

NUMERATION

Skill 1

Name ____________________

Date ____________________

Fill in the missing numbers.

1) 372, 373, 374, 375, 376, 377, 378, 379

2) 941, 940, 939, 938, 937, 936, 935, 934

3) 739, 740, 741, 742, 743, 744, 745, 746

4) 401, 400, 399, 398, 397, 396, 395

5) 736, 735, 734, 733, 732, 731, 730, 729

Write the number that comes before, after, or between for each of the following:

1) 669, 670

2) 499, 500

3) 799, 800

4) 397, 398

5) 489, 490, 491

LEVEL D

NUMERATION

Skill 2

Name ______________________

Date ______________________

Fill in the missing numbers.

1) 30, 40, 50, 60, 70, 80, 90, 100

2) 220, 210, 200, 190, 180, 170, 160, 150

3) 540, 550, 560, 570, 580, 590, 600, 610

4) 695, 690, 685, 680, 675, 670, 665, 660

5) 815, 820, 825, 830, 835, 840, 845

6) 115, 120, 125, 130, 135, 140, 145, 150

7) 393, 395, 397, 399, 401, 403, 405, 407

8) 849, 847, 845, 843, 841, 839, 837, 835

9) 972, 974, 976, 978, 980, 982, 984, 986

10. 426, 424, 422, 420, 418, 416, 414, 412

LEVEL D

NUMERATION

Skill 3

Name ____________________

Date ____________________

Fill the blanks to show the place value of each digit.

1) 486 = 4 hundreds + 6 ones + 8 tens

2) 907 = 0 tens + 9 hundreds + 7 ones

3) Circle the digit in the hundreds place. [✓ 7]06

4) Circle the digit in the tens place. 8[✓ 1]9

Write the total value in short form.

5) 2000 + 70 + 500 + 2 = 2572

6) 700 + 3000 + 6 = 3706

Write these numbers in expanded notation.

7) 2432 = 2000 + 400 + 30 + 2

8) 9038 = 9000 + 30 + 8

Write the numerals for these number words.

9) five thousand, two hundred forty-five 5245

10) two thousand, seven 2007

LEVEL D
NUMERATION
Skill 4

Name ______________________________
Date ______________________________

Put an >, <, or = in the ○ to make a true statement.

1) 419 < 491

2) 199 = 199

3) 996 > 696

4) 313 > 131

5) 846 < 964

6) 260 = 260

7) 286 < 368

8) 39 < 49

9) 730 > 703

10) 585 = 585

LEVEL D
ADDITION AND SUBTRACTION
Skill 1, 2, 3, 4

Name ______________________
Date ______________________

Label the parts using the words "sum" or "addend".

6 addend
+3 addend
9 sum

13 = 2 + 3 + 8
sum addend addend adde

Find the missing addend.

$\boxed{9} + 6 + 3 = 18$

$6 + 7 + \boxed{1} = 14$

$\begin{array}{r} 7 \\ \boxed{0} \\ +8 \\ \hline 15 \end{array}$

Add or Subtract.

$\begin{array}{r} 51 \\ -31 \\ \hline 20 \end{array}$ $\begin{array}{r} 28 \\ +68 \\ \hline 96 \end{array}$ $\begin{array}{r} 93 \\ -19 \\ \hline 74 \end{array}$ $\begin{array}{r} 88 \\ -59 \\ \hline 29 \end{array}$ $\begin{array}{r} 61 \\ +19 \\ \hline 80 \end{array}$

LEVEL D

ADDITION AND SUBTRACTION

Skill 5, 6, 7

Name ______________________

Date ______________________

Add or Subtract.

384	512	781	897	456
+514	+321	-230	-262	-212
898	833	551	635	244

Add.

274	389	653	887	332	302
+275	+430	+129	+92	146	161
549	819	782	979	+209	+255
				687	718

Subtract.

791	451	522	481
-286	-170	-191	-237
505	281	331	244

LEVEL D
Name
ADDITION AND SUBTRACTION
Date
Skill 8

Solve the problems.

1. Jack has 8 boats and his brother has 6. How many more boats has Jack? 2 boats

2. In a big tank there were 7 small tadpoles and 8 large ones. How many tadpoles were there? 15 tadpoles

3. Ruth and Liz scored 80 points together. Betty scored 40 points. What was the total score for the three girls? 120 points

4. If you had 46 football cards and collected 22 more, how many football cards would you have in all? 68 football cards

5. Shirley's favorite television show is 45 minutes long. If 28 minutes have passed, how many minutes are left? 17 minutes.

LEVEL D
Name
ADDITION AND SUBTRACTION
Date
Skill 9

Write >, <, or = in each ◯.

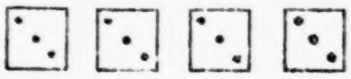
1) 3 + 9 (=) 8 + 4
2) 15 (=) 7 + 8
3) 64 (>) 46
4) 14 - 6 (<) 10 + 2
5) 2 (<) 8, so 42 (<) 48

LEVEL D
MULTIPLICATION AND DIVISION
Skill 1, 2 (Page 1 of 2 pages)

Name ______________________
Date ______________________

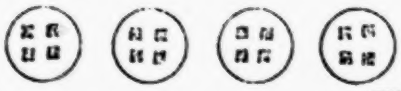
Write a numeral in the ☐ to complete the statements.

1.



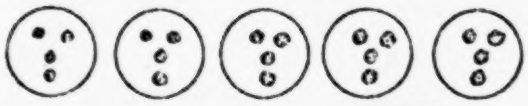
4 sets of 3 = 12   4 x 3 = 12

2.



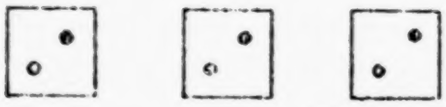
4 sets of 4 = 16   4 x 4 = 16

3.



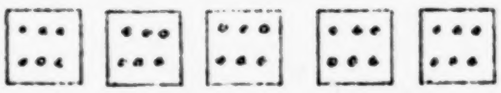
5 sets of 4 = 20   5 x 4 = 20

4.



3 sets of 2 = 6   3 x 2 = 6

5.



5 sets of 6 = 30   5 x 6 = 30

LEVEL D

Name ____________________

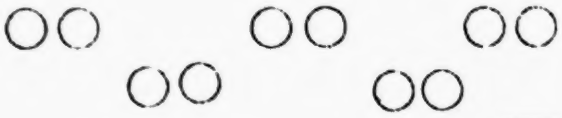
MULTIPLICATION AND DIVISION

Date ____________________

Skill 1, 2 (Page 2 of 2 pages)

Complete each equation.

6.



$2 + 2 + 2 + 2 + 2 = \boxed{10}$

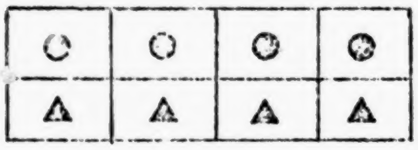
$5 \times 2 = \boxed{10}$

7.

$6 + 6 + 6 + 6 = \boxed{24}$

$4 \times 6 = \boxed{24}$

8.



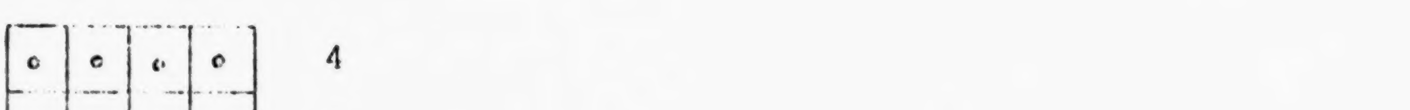
$= 4$

$= +4$

$\boxed{8}$

$4 \times 2 = \boxed{8}$

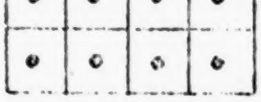
9.



$3 + 3 + 3 + 3 + 3 = \boxed{15}$

$5 \times 3 = \boxed{15}$

10.



4

4

+ 4

$\boxed{12}$

$4 \times 3 = \boxed{12}$

LEVEL D

MULTIPLICATION AND DIVISION

Skill 3, 4 (Page 1 of 2 pages)

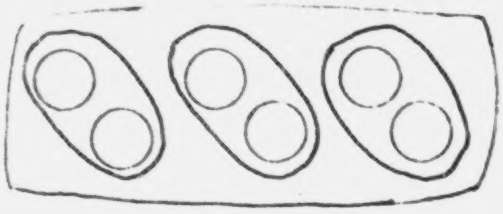
Name ______________________

Date ______________________

Draw a ring around the subsets.

Put the numeral in the ☐.

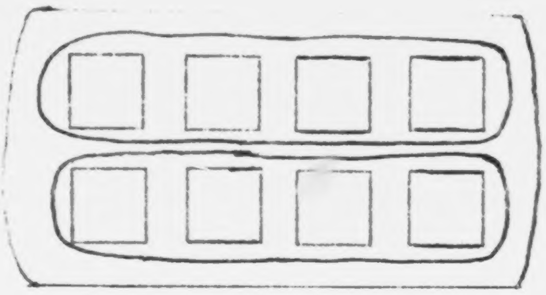
1.



$6 = \boxed{3}$ sets of 2

$6 \div 2 = \boxed{3}$, so $\boxed{3} \times 2 = 6$

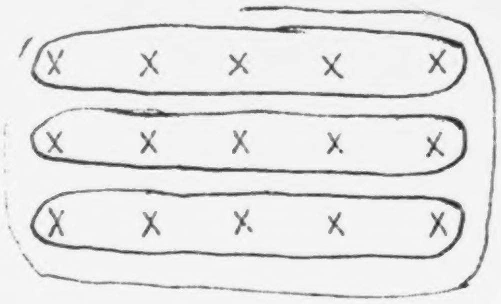
2.



$8 = \boxed{2}$ sets of 4

$8 \div 4 = \boxed{2}$, so $\boxed{2} \times 4 = 8$

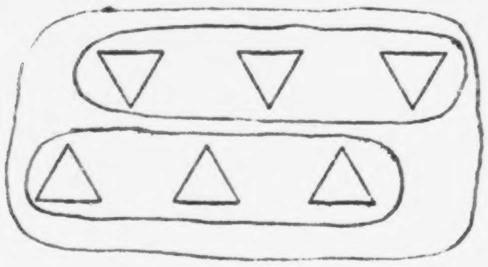
3.



$15 = \boxed{3}$ sets of 5

$15 \div 5 = \boxed{3}$, so $\boxed{3} \times 5 = 15$

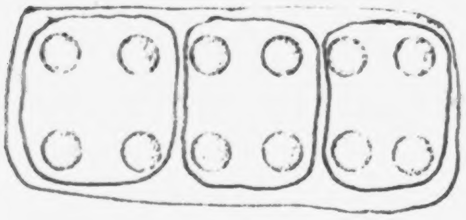
4.



$6 = \boxed{2}$ sets of 3

$6 \div 3 = \boxed{2}$, so $\boxed{2} \times 3 = 6$

5.



$12 = \boxed{3}$ sets of 4

$12 \div 4 = \boxed{3}$, so $\boxed{3} \times 4 = 12$

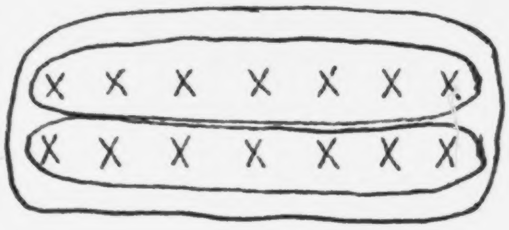
LEVEL D

MULTIPLICATION AND DIVISION

Skill 3, 4 (Page 2 of 2 pages)

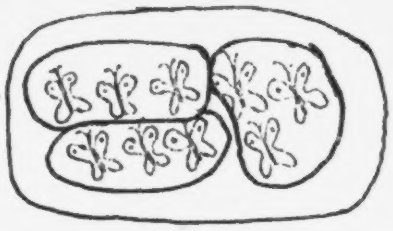
Name ______________________

Date ______________________

6. 

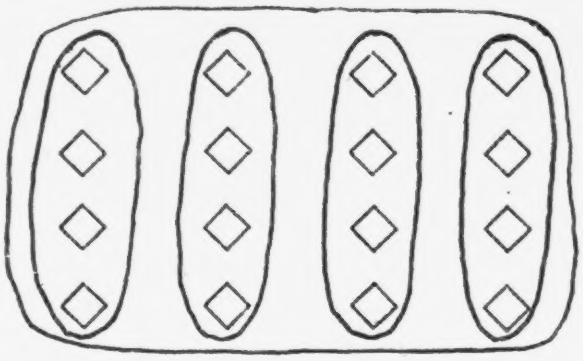
$14 = \boxed{2}$ sets of 7

$14 \div 7 = \boxed{2}$, so $\boxed{2} \times 7 = 14$

7. 

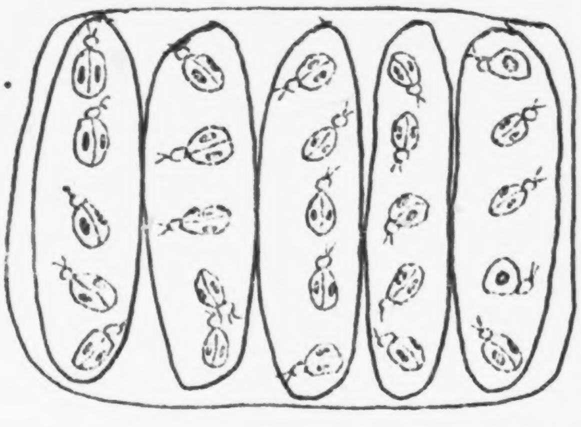
$9 = \boxed{3}$ sets of 3

$9 \div 3 = \boxed{3}$, so $\boxed{3} \times 3 = 9$

8. 

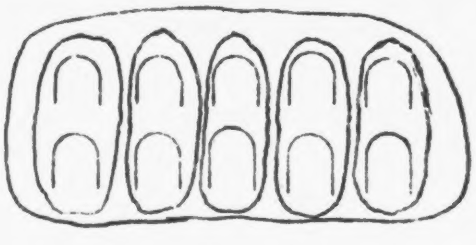
$16 = \boxed{4}$ sets of 4

$16 \div 4 = \boxed{4}$, so $\boxed{4} \times 4 = 16$

9. 

$25 = \boxed{5}$ sets of 5

$25 \div 5 = \boxed{5}$, so $\boxed{5} \times 5 = 25$

10. 

$10 = \boxed{5}$ sets of 2

$10 \div 2 = \boxed{5}$, so $\boxed{5} \times 2 = 10$

LEVEL D
MULTIPLICATION AND DIVISION
Skill 5

Name ______________________
Date ______________________

Solve the equations.

$3 \times 0 = \boxed{0}$ $0 \times 3 = \boxed{0}$ $0 \div 3 = \boxed{0}$ $4 \times 0 = \boxed{0}$

$0 \times 4 = \boxed{0}$ $0 \div 4 = \boxed{0}$ $8 \times 1 = \boxed{8}$ $1 \times 8 = \boxed{8}$

$8 \times 0 = \boxed{0}$ $8 \div 1 = \boxed{8}$ $5 \times 1 = \boxed{5}$ $1 \times 5 = \boxed{5}$

$1 \times 6 = \boxed{6}$ $6 \times 1 = \boxed{6}$ $0 \div 6 = \boxed{0}$ $6 \div 1 = \boxed{6}$

$7 \times 1 = \boxed{7}$ $0 \times 7 = \boxed{0}$ $7 \div 1 = \boxed{7}$ $2 \times 1 = \boxed{2}$

LEVEL D
MULTIPLICATION AND DIVISION
Skill 7

Name ______________________
Date ______________________

Label the parts.

a) 5 → a) factor
b) x4 → b) factor
c) 20 → c) product

a) b) c)
20 = 5 x 4

a) product
b) factor
c) factor

LEVEL D

MULTIPLICATION AND DIVISION

Skill 8

Name ____________________

Date ____________________

Put the numeral in the $\square$.

1. $5 \times 6 = \boxed{30}$
   $\boxed{6} \times 5 = 30$

2. $4 \times 8 = \boxed{32}$
   $8 \times \boxed{4} = 32$

3. $7 \times 3 = \boxed{21}$
   $\boxed{3} \times 7 = 21$

4. $9 \times 5 = \boxed{45}$
   $\boxed{5} \times 9 = 45$

5. $8 \times 5 = \boxed{40}$
   $5 \times \boxed{8} = 40$

6. $6 \times 4 = \boxed{24}$
   $\boxed{4} \times 6 = 24$

7. $9 \times 3 = 3 \times \boxed{9}$

8. $2 \times 8 = \boxed{8} \times 2$

9. $4 \times 8 = 8 \times \boxed{4}$

10. $7 \times 4 = \boxed{4} \times 7$

LEVEL D

MULTIPLICATION AND DIVISION

Skill 9 (Page 1 of 2 pages)

Name ____________________

Date ____________________

Solve these problems. **Label.**

1. Each of 5 cats had 5 kittens. Five sets of 5 kittens make how many kittens?

25 kittens

2. How many legs do 4 kittens have?

16 legs

3. Four girls each had 3 dolls. How many dolls did they have in all?

12 dolls

4. How many packs of gum will 30¢ buy, if each pack cost 5¢?

6 packs

5. There are 3 birds in each of the 6 bird cages in the pet shop. How many birds are there in all?

18 birds

LEVEL D

MULTIPLICATION AND DIVISION

Skill 9 (Page 2 of 2 pages)

Name ____________________

Date ____________________

6. There are 7 rooms in the house. There are 4 windows in each room. How many windows are there in the house?

28 windows

7. The boys have a total of 36 baseball cards. Each of the 4 boys has the same number of baseball cards. How many cards does each boy have?

9 cards

8. There are 9 girls in the club. If each girl bakes 4 cakes for the cake sale, how many cakes will the club have for the sale?

36 cakes

9. The girls had 40 cookies. They put 4 cookies in each box. How many boxes did they use?

10 boxes

10. Each of 8 boys had 4 model cars. How many cars did they have in all?

32 cars

LEVEL D

FRACTIONS

Skill 1

Name ______________________

Date ______________________

Write the fraction to compare the number of shaded balls with the total number of balls.

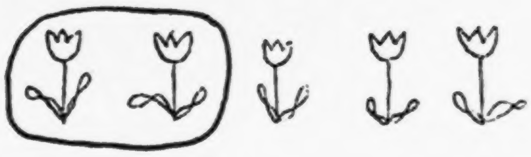
1. ● ● ○ ○ ○ $\frac{2}{5}$

2. ● ● ● ○ ○ ○ $\frac{3}{6}$

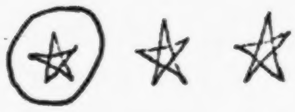
3. ● ○ ○ ○ $\frac{1}{4}$

4. ○ ● $\frac{1}{2}$

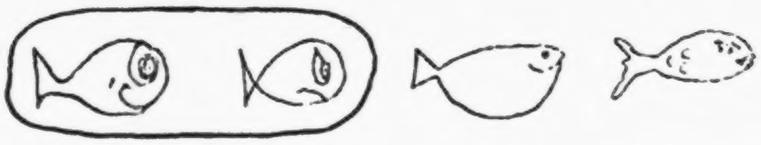
5. Circle $\frac{2}{5}$ of the set.



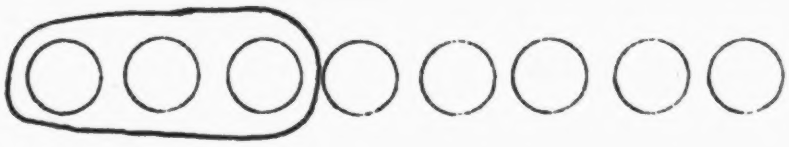
6. Circle $\frac{1}{3}$ of the set.



7. Circle $\frac{2}{4}$ of the set.



8. Circle $\frac{3}{8}$ of the set.



9. $\frac{2}{4}$ means ___2___ of ___4___ equal parts.

10. $\frac{1}{3}$ means ___1___ of ___3___ equal parts.

LEVEL D

FRACTIONS

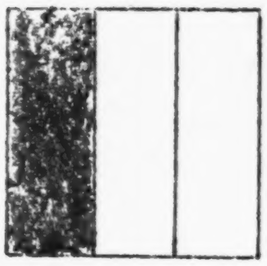
Skill 2

Name ____________________

Date ____________________

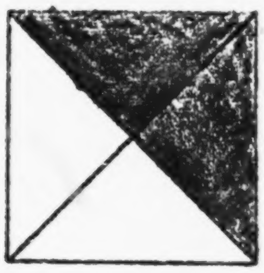
Write the fraction for: a. the shaded region

b. the unshaded region



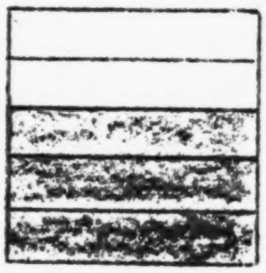
a. $\frac{1}{3}$

b. $\frac{2}{3}$



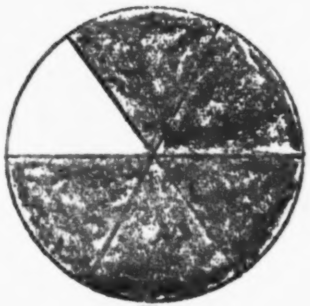
a. $\frac{2}{4}$

b. $\frac{2}{4}$



a. $\frac{3}{5}$

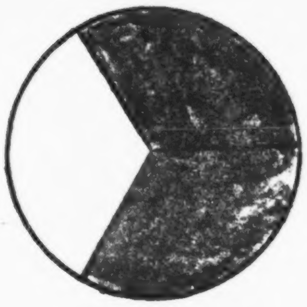
b. $\frac{2}{5}$



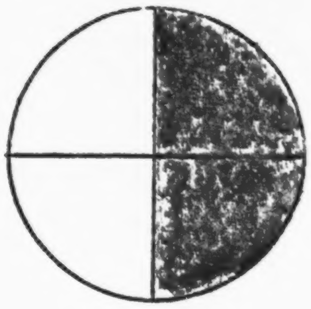
a. $\frac{5}{6}$

b. $\frac{1}{6}$

Shade $\frac{2}{3}$ of the circle



Shade $\frac{2}{4}$ of the circle



LEVEL D

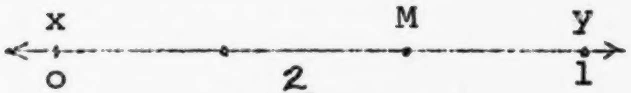
FRACTIONS

Skill 3

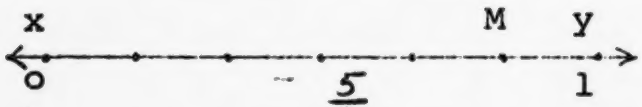
Name ____________________

Date ____________________

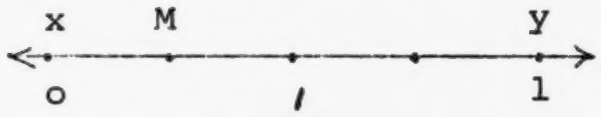
Name the fractional number labeled M on the number line.



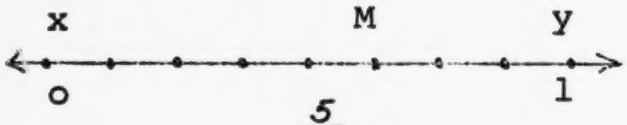
$\frac{2}{3}$



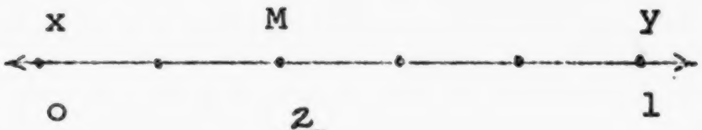
$\frac{5}{6}$



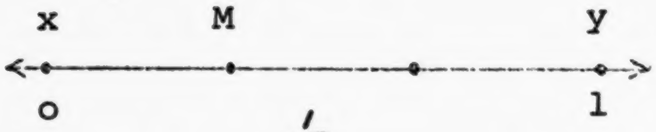
$\frac{1}{4}$



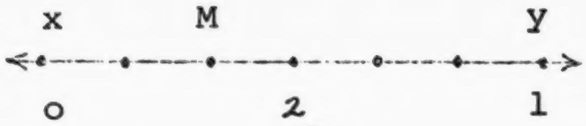
$\frac{5}{8}$



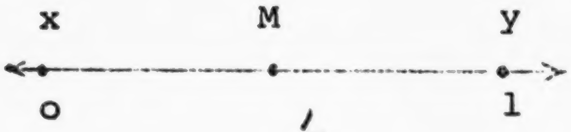
$\frac{2}{5}$



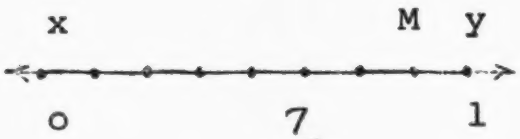
$\frac{1}{3}$



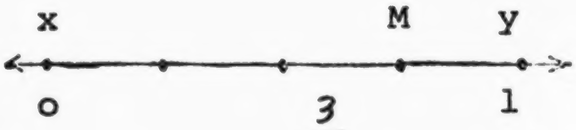
$\frac{2}{6}$



$\frac{1}{2}$



$\frac{7}{8}$



$\frac{3}{4}$

LEVEL D

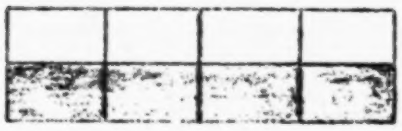
FRACTIONS

Skill 4

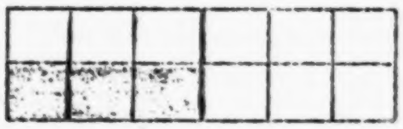
Name ____________________

Date ____________________

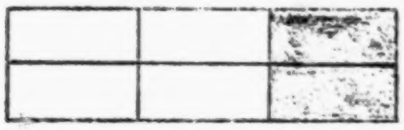
Write an equivalent fraction for the shaded part of each bar.



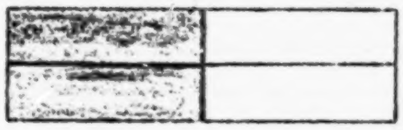
$\frac{4}{8} = \boxed{\frac{1}{2}}$



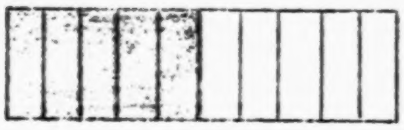
$\frac{3}{12} = \boxed{\frac{1}{4}}$



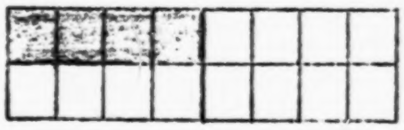
$\frac{2}{6} = \boxed{\frac{1}{3}}$



$\frac{2}{4} = \boxed{\frac{1}{2}}$

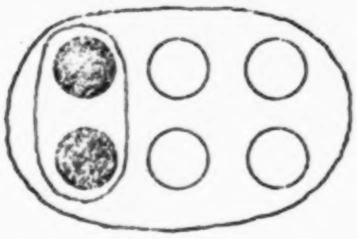


$\frac{5}{10} = \boxed{\frac{1}{2}}$

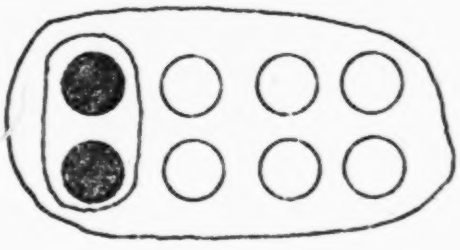


$\frac{1}{4} = \boxed{\frac{4}{16}}$

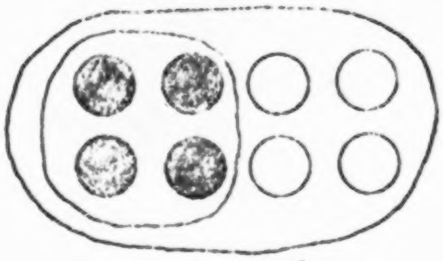
Name the fractional numbers shown by the shaded subsets.



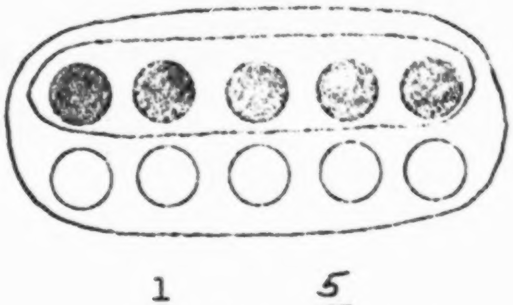
$\frac{1}{3}$ or $\frac{2}{6}$



$\frac{1}{4}$ or $\frac{2}{8}$



$\frac{1}{2}$ or $\frac{4}{8}$



$\frac{1}{2}$ or $\frac{5}{10}$

LEVEL D

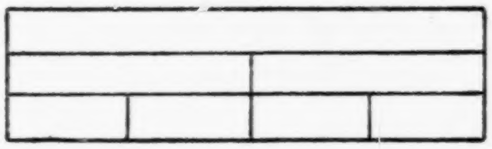
FRACTIONS

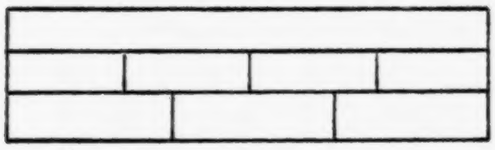
Skill 5

Name ______________________

Date ______________________

Write >, < , or = in the $\bigcirc$.



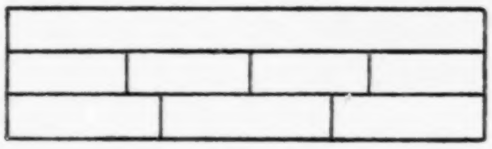


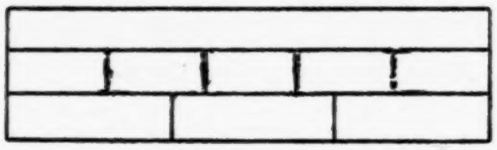
1. $\frac{1}{4} \textcircled{<} \frac{1}{2}$

2. $\frac{1}{2} \textcircled{>} \frac{1}{4}$

3. $\frac{1}{3} \textcircled{>} \frac{1}{4}$

4. $\frac{1}{4} \textcircled{<} \frac{1}{3}$



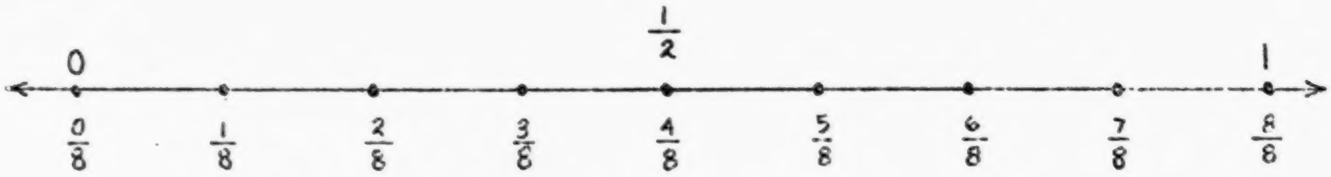


5. $\frac{2}{3} \textcircled{<} \frac{3}{4}$

6. $\frac{3}{4} \textcircled{>} \frac{2}{3}$

7. $\frac{4}{5} \textcircled{>} \frac{2}{3}$

8. $\frac{2}{3} \textcircled{<} \frac{4}{5}$



9. $\frac{6}{8}$ is to the left of $\frac{7}{8}$, so $\frac{6}{8} \textcircled{<} \frac{7}{8}$

10. $\frac{4}{8}$ is at the same place as $\frac{1}{2}$, so $\frac{4}{8} \textcircled{=} \frac{1}{2}$

LEVEL D

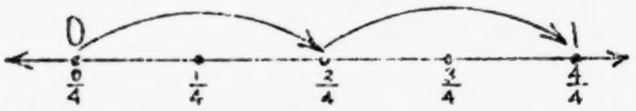
FRACTIONS

Skill 6

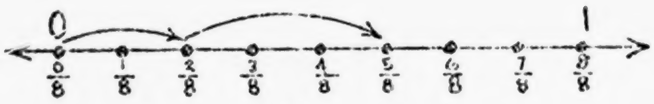
Name ______________________

Date ______________________

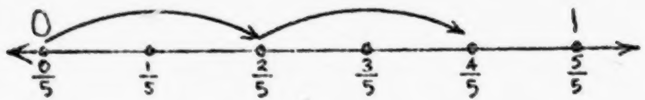
Study the number lines and complete the equations.


0
1
0/4
1/4
2/4
3/4
4/4

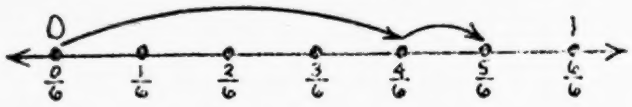
1. $\frac{2}{4} + \frac{2}{4} =$ $\frac{4}{4}$ or 1


0
1
0/8
1/8
2/8
3/8
4/8
5/8
6/8
7/8
8/8

2. $\frac{2}{8} + \frac{3}{8} =$ $\frac{5}{8}$

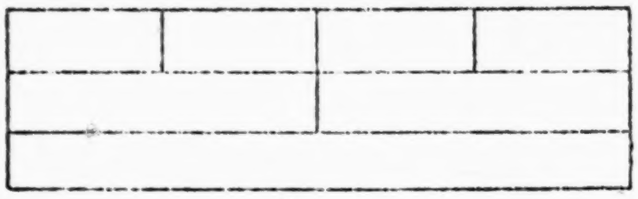

0
1
0/5
1/5
2/5
3/5
4/5
5/5

3. $\frac{2}{5} + \frac{2}{5} =$ $\frac{4}{5}$


0
1
0/6
1/6
2/6
3/6
4/6
5/6
6/6

4. $\frac{4}{6} + \frac{1}{6} =$ $\frac{5}{6}$

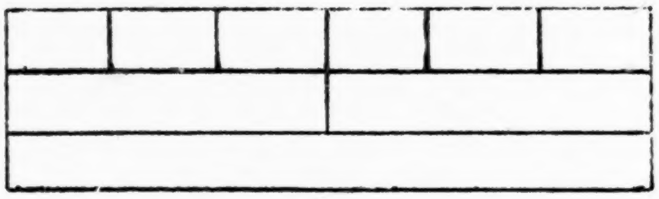
Study the rods and complete the equations.



$\frac{1}{4} + \frac{3}{4} =$ $\frac{4}{4}$ or 1

$\frac{2}{4} + \frac{2}{4} =$ $\frac{4}{4}$ or 1

$\frac{1}{2} + \frac{1}{2} =$ $\frac{2}{2}$ or 1



$\frac{1}{6} + \frac{5}{6} =$ $\frac{6}{6}$ or 1

$\frac{3}{6} + \frac{3}{6} =$ $\frac{6}{6}$ or 1

$\frac{1}{2} + \frac{1}{2} =$ $\frac{2}{2}$ or 1

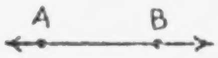
LEVEL D   Name ______________________

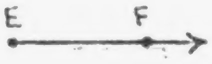
NON-METRIC GEOMETRY   Date ______________________

Skill 1, 2

Write the name for each ray.

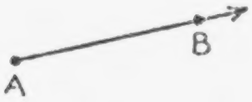
1.

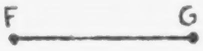




1. $\overrightarrow{EF}$

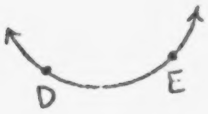
2.

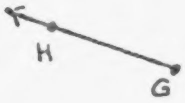




2. $\overrightarrow{AB}$

3.





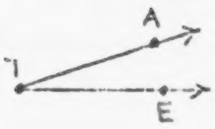
3. $\overrightarrow{GH}$

4. This symbol ⟶ means ray.

5. This symbol ⟷ means line.

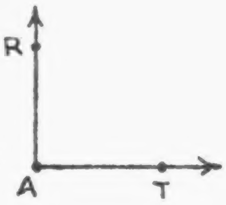
Write the name for each angle.

6.



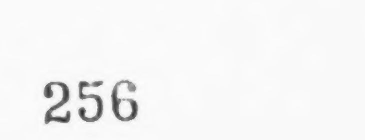
∠ATE or ∠ETA

7.



∠TAR or ∠RAT

8. Name the two rays that make up this angle.



$\overrightarrow{AS}$ $\overrightarrow{AM}$

9. The symbol ∠ means angle.

LEVEL D

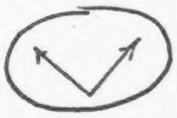
NON-METRIC GEOMETRY

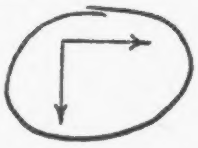
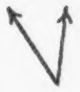
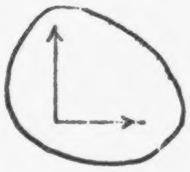
Skill 3, 4

Name ______________________

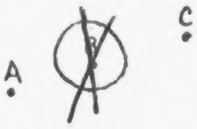
Date ______________________

1. Circle the right angles.

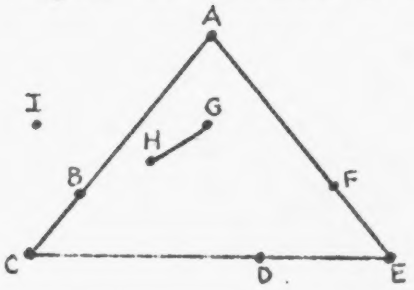


2. Put an X on the point that is in the circular region.



Use this triangle to answer 3 through 7.



3. Name the points on the triangle. ABC DEF

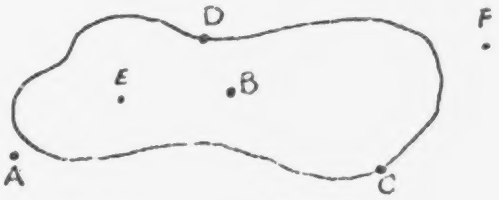
4. Name the points in the triangular region. GH

5. Name the corner points of the triangle. ACE

6. Join G and H. Is all of GH inside the curve? yes

7. Name the point outside of the curve. I

Use this curve to answer 8 through 10.



8. Name the points which are inside the curve. B E

9. Name the points which are on the curve. C D

10. Name the points which are outside the curve. AF

LEVEL D

NON-METRIC GEOMETRY

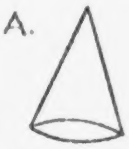
Skill 5

Name ______________________

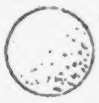
Date ______________________

1. Select the picture of a sphere. 1. B

A.



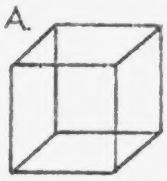
B.



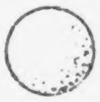
C.

2. Select the picture of a cube. 2. A

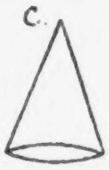
A.



B.



C.

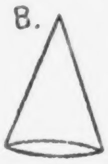


D.

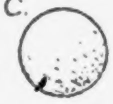
3. Select the picture of a cone. 3. B

A.

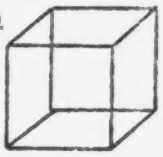
B.



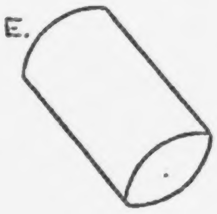
C.



D.

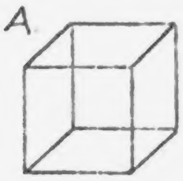


E.

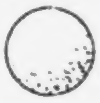


4. Select the picture of a cylinder. 4. C

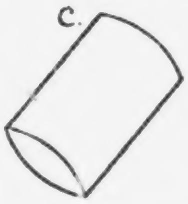
A.



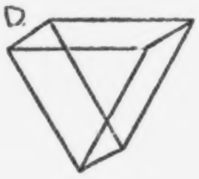
B.



C.



D.

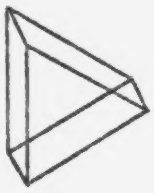


5. Select the picture of a rectangular solid. 5. A

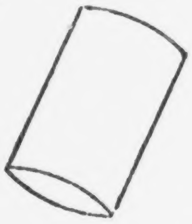
A.

B.

C.



D.



LEVEL D

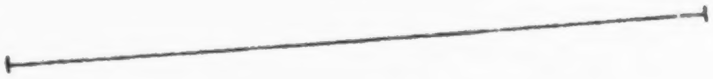
METRIC GEOMETRY

Skill 1 (Page 1 of 2 pages)

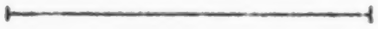
Name

Date

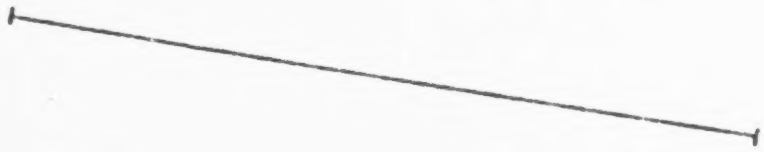
Measure these lines to the nearest $\frac{1}{2}$ inch. **Label.**

1. 

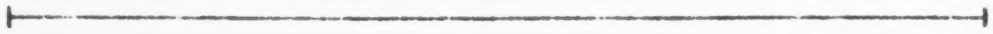
1. 3 inches

2. 

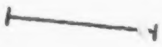
2. $1\frac{1}{2}$ inches

3. 

3. $3\frac{1}{2}$ inches

4. 

4. $4\frac{1}{2}$ inches

5. 

5. $\frac{1}{2}$ inch

LEVEL D

METRIC GEOMETRY

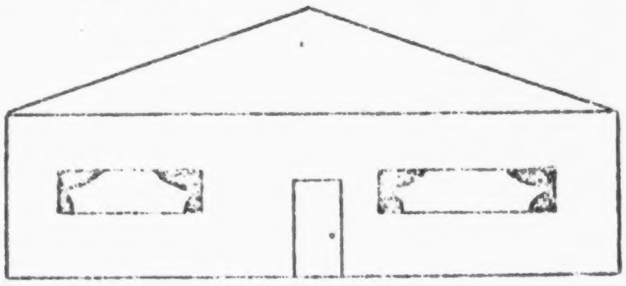
Name ______________________

Date ______________________

Skill 1 (Page 2 of 2 pages)

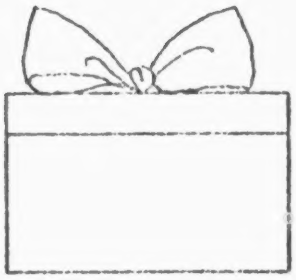
Use a foot ruler to measure the length of the following to the nearest 1/4 inch. Label.

1.



1. $2\frac{3}{4}$ inches

2.

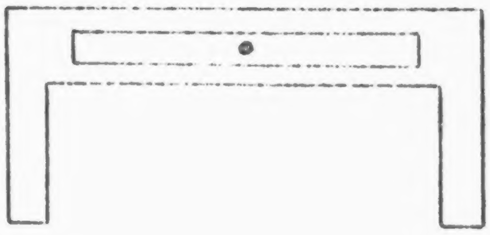


2. $1\frac{1}{4}$ inches

3.

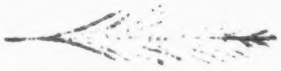
3. $3\frac{3}{4}$ inches

4.



4. $2\frac{1}{4}$ inches

5.



5. $1\frac{1}{4}$ inches

LEVEL D

METRIC GEOMETRY

Skill 2

Name ______________________

Date ______________________

Solve the problems.

1. 1 foot + 6 inches = 1. 18 inches

2. 1 yard - 2 feet = 2. 1 feet

3. 2 feet + 4 inches = 3. 28 inches

4. 6 feet + 3 feet = 4. 3 yards

5. 1 yard + 11 inches = 5. 47 inches

6. 3 feet + 12 inches = 6. 4 feet

7. 1 foot - 10 inches = 7. 2 inches

8. 1 yard - 12 inches = 8. 2 feet

9. 2 yards + 6 feet = 9. 4 yards

10. 3 yards - 36 inches = 10. 2 yards

LEVEL D
METRIC GEOMETRY
Skill 3, 4

Name ______________________
Date ______________________

Solve the problems.

1. 1 quart + 2 pints = 1. 4 pints

2. 1 gallon - 2 quarts = 2. 2 quarts

3. 4 cups + 1 pint = 3. 6 cups

4. 5 quarts + 3 quarts = 4. 2 gallons

5. 2 gallons + 3 quarts = 5. 11 quarts

6. Sally is selling orange juice for 10¢ a cup. What does a quart of orange juice cost?

6. 40¢

7. Tom drinks a quart of milk each day. He drank 2 cups today. He needs to drink 2 more cups of milk.

8. Susan needs a gallon of ice cream for a party. She has one quart. Susan needs 3 more quarts of ice cream.

9. If each of 6 boys at a birthday party drinks a pint of orange soda, how many quart bottles will be needed? 3

10. Sue bought 2 yards of red material, 2 feet of green and 12 inches of white. She bought 3 yards of material.

LEVEL D

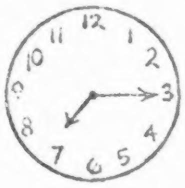
TIME

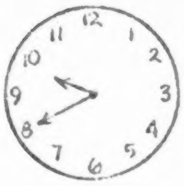
Skill 2, 3,

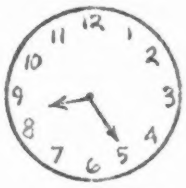
Name ______________________________

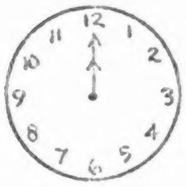
Date ______________________________

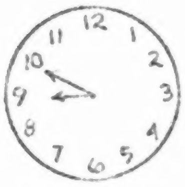
Read the time shown on each clock. Fill in the missing word.

1.  quarter past 7 o'clock

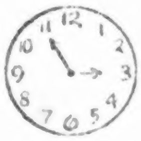
2.  20 minutes to 10 o'clock

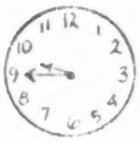
3.  25 minutes past 8 o'clock

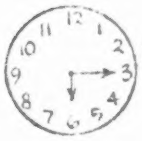
4.  12 o'clock

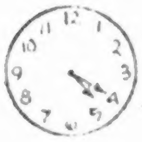
5.  10 minutes to 9 o'clock

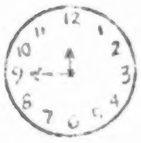
Match the clockfaces with the time statements.

6.  quarter past 6 o'clock

7.  45 minutes past 9 o'clock

8.  5 minutes to 3 o'clock

9.  quarter to 12 o'clock

10.  20 minutes past 4 o'clock

LEVEL D

TIME

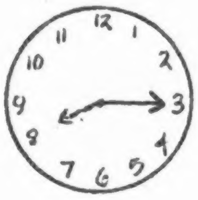
Skill 4, 5

Name ______________________

Date ______________________

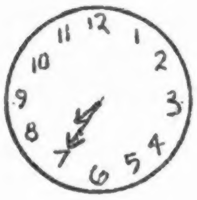
Make the clock tell the time.

1.



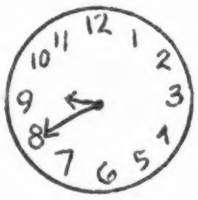
8:15

2.



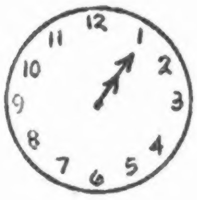
7:35

3.



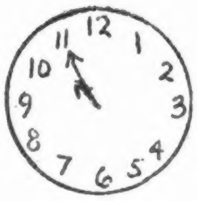
9:40

4.



1:05

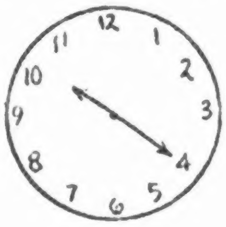
5.



10:55

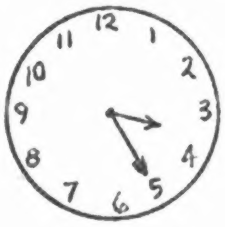
Write the time shown on each clock in time notation.

6.



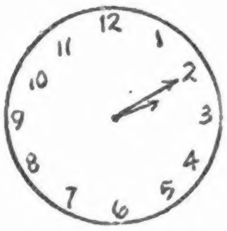
10:20

7.



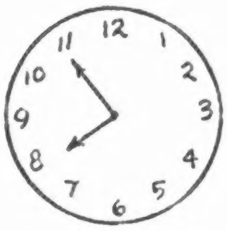
3:25

8.



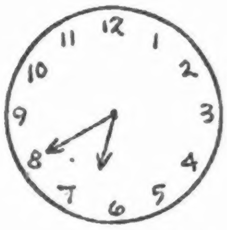
2:10

9.



7:55

10.



6:40

LEVEL D

MONEY

Skill 1

Name ______________________

Date ______________________

1. The value of a dollar is 100 cents.

2. The value of 136¢ is 1 dollar, 6 cents, 3 dimes.

3. How many cents in 2 dollars, 2 dimes and 4 pennies? 224 ¢

4. How many cents in 1 dollar, 3 dimes and 6 pennies? 136 ¢

5. Complete the chart.

cents	$	10¢	1¢
236	2	3	6
456	4	5	6
39	0	3	9
167	1	6	7
98	0	9	8
642	6	4	2

LEVEL D

MONEY

Skill 2

Name ______________________

Date ______________________

Write the amount of money using the $ sign and the point.

1. four dollars and seventeen cents $4.17
2. six dollars and fifteen cents $ 6.15
3. three hundred forty-seven cents $ 3.47
4. two dollars and ten cents $ 2.10
5. seven dollars and fifty cents $ 7.50

Complete the chart.

Dollars	Dimes	Cents	Using $ and .
9	9	7	$9.97
4	7	6	$4.76
5	3	2	$5.32
8	6	8	$8.68
7	5	3	$7.53

LEVEL D

MONEY

Skill 3

Name ____________________

Date ____________________

Name the sums.

$ 68	76¢	$ 42	83¢	$ 54
+53	+82	+57	+29	+66
$ 121	158¢	$ 99	112¢	$ 120

Name the missing amounts.

$ 57	81¢	$ 33	$17	71¢
-38	- 24	-16	- 9	- 27
$ 19	57¢	$ 17	$ 8	44¢

LEVEL D

MONEY

Skill 4

Name ____________________

Date ____________________

1. Balloons cost 5 for 25¢. What does one balloon cost? 5 ¢

2. Pencils cost 4¢ each. How much will 6 pencils cost? 24 ¢

3. Jane saved 3 dollars, 5 dimes and 8 pennies. How many cents was this.

3. 358

4. How much for 1 can of peaches if 3 cans cost 99¢? 3

5. Nancy bought a dress for $5.98 and a blouse for $3.50. How much did Nancy spend?

5. $ 7.48

LEVEL D

SPECIAL TOPICS

Skill 1

Name ____________________

Date ____________________

Write the Roman numerals for the following.

6 = VI
10 = X
3 = III

4 = IV
7 = VII
5 = V

Write these Roman numerals in our kind of numerals.

VIII = 8
XII = 12
II= 2
IX = 9

LEVEL D

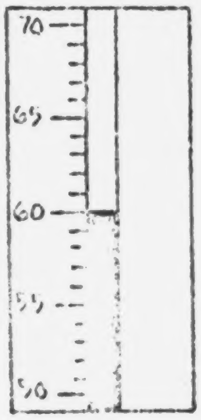
SPECIAL TOPICS

Skill 2

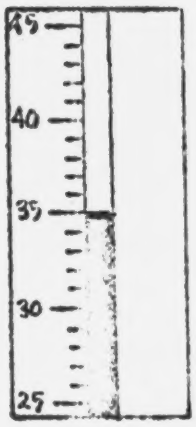
Name ____________________

Date ____________________

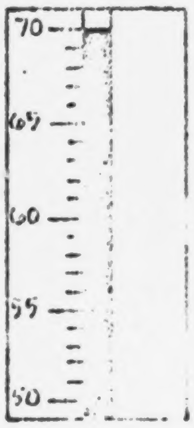
Write the temperature shown on the picture of the thermometer. Use the degree (°) symbol.


70
65
60
55
50

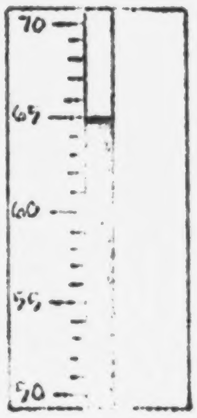
1. 60°


45
40
35
30
25

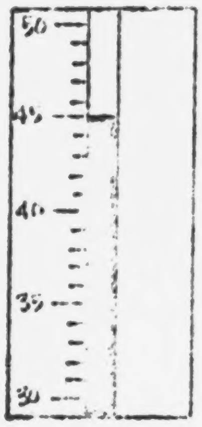
2. 35°


70
65
60
55
50

3 70°


70
65
60
55
50

4. 65°


50
45
40
35
30

5 45°

LEVEL D

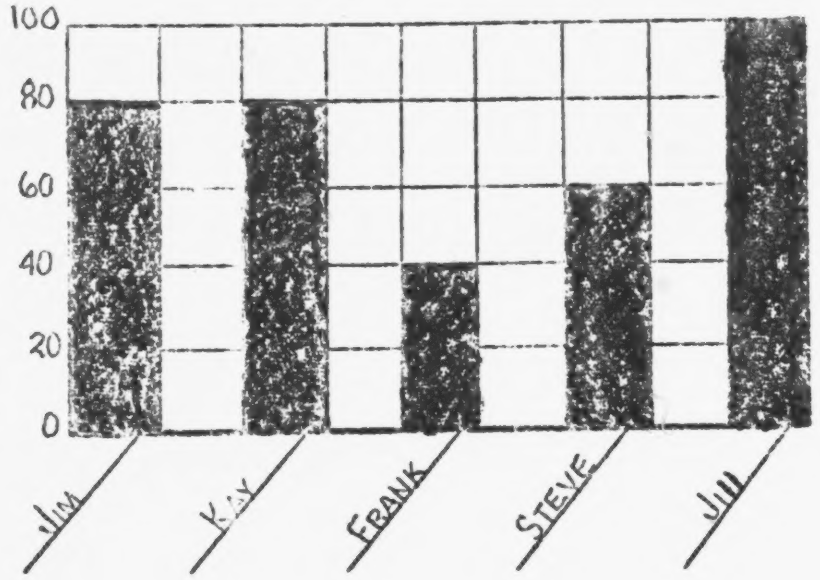
Name ______________________________

SPECIAL TOPICS

Date ______________________________

Skill 3

Read the bar graph and answer the following questions.



1. Who made the highest score on the test? 1. Jill

2. Who made the lowest score on the test? 2. Frank

3. What was Jim's score? 3. 80

4. Who made the score of 60? 4. Steve

5. How much higher was Kay's score than Frank's? 5. 40

MATHEMATICS CONTINUUM

LEVEL E

BOOK 4

Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and continuum mastery tests should be used to provide sufficient evidence to check the 70-100% (mastery level) for each skill.

Metric and Non-Metric Geometry have been combined under the heading Geometry.

Time skills have not been keyed under Textual Resources because they are interspersed with other skills.

LEVEL E NUMERATION	Example Numeration
Review of Level D Skills	
1. Counts to 1,000,000 by reading or writing short sequences of numbers from any starting point.	Fill the blanks in this sequence. 107,998; 107,999 ; 108,000 ; 108,001 : 108,002 ; 108,003 ; 108,004
2. Writes numerals to 1,000,000 in compact form, expanded form or in words and vice versa. Identifies place value up to 6 digits and makes a place value chart.	Write the number words for the following numeral. 432 four hundred thirty-two Write the place value of the underlined digit. 75$\underline{6}$,904 thousands Write this number in expanded form. 56,924 = 50,000 + 6,000 + 900 + 20 + 4
3. Writes > or < to show the relationship between two numbers to 1,000,000.	Put > or < in the ○. 947,350 (>) 94,430
4. Writes Roman numerals for 1-20, 50, 100, 500, 1,000 and vice versa.	Write the standard numeral for these Roman numerals. XV = 15 D = 500

Textual Resources	Related Resources	Notes
Numeration		
1. HM Book 4, pp. 1-6, 9, 12-16	HM Visuals 4 (1, 2) HM Masters 4 (1, 3, 4)	
2. HM Book 4, pp. 17-21, 24, 26, 208, 209	HM Visuals 4 (2, 22) HM Masters 4 (5, 56)	
3.		
4. HM Book 4, pp. 22, 23, 25		

LEVEL E

Numeration

5. Defines and uses the idea of universal set, intersection and union of sets. No mastery test until Level F.

6. In-Depth.

Identifies numbers and states rules for adding, subtracting and multiplying two numbers; e.g., E + E = E. Selects the rule when a numerical example is given and vice versa. Teacher note: Mastery test is provided.

Example

Universal set (U):

all animals in the world

Subsets:

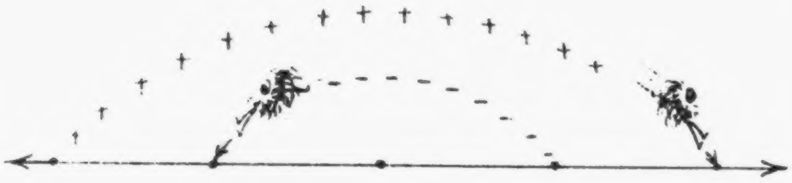
A: tigers B: mice

If the additions below are done, will the answer be odd or even?

O + O = Odd Even

E + O = Odd Even

ADDITION AND SUBTRACTION



Review of Level D Skills

1. Reinforces the commutative and associative properties for addition and the idea that addition and subtraction are inverse operations.

Addition and Subtraction

Complete the statements.

$\boxed{435} + 35 = 35 + 435$

$$\begin{aligned} 9 + 6 &= 9 + (1 + 5) \\ &= (9 + \boxed{1}) + 5 \\ &= \boxed{10} + 5 \\ &= \boxed{15} \end{aligned}$$

$(7 + 2) - 2 = 7 + (2 - 2) = \boxed{7}$

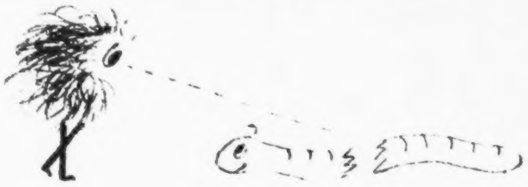
Textual Resources	Related Resources	Notes
Numeration		
5. HM Book 4, pp. 7, 8, 35	HM Masters 4 (2, 8)	
6. HM Book 4, pp. 27, 214-217, 318-321, 334, 341	HM Masters 4 (6, 78)	
Addition and Subtraction		
HM Book 4, pp. 28-30, 36, 37, 44, 45		
1. HM Book 4, pp. 38, 39, 64	HM Visuals 4 (3) HM Masters 4 (9)	

LEVEL E	Example
Addition and Subtraction	Addition and Subtraction
2. Identifies or solves a true, false, open, equal or unequal number sentence.	Write this sentence as a number sentence. The sum of 17 and 14 is 31. Replace he or she with a name to make the sentence true. He sat in a corner. She has a little lamb. Write >, < or = in the ○. 9 - 4 (=) 8 - 3
3. Uses the addition and subtraction rule to find the unknown member of an ordered pair when given one of the members.	Use the rule to find the unknown member of each pair. The second number is 5 greater than the first. (0,a), (1,b), (2,c,), (3,d), (4,e), (5,f)
4. Performs addition and subtraction with renaming for three or more place numbers.	Name the sum. 45 261 389 695 Name the difference. 909 - 242 667
5. Solves word problems requiring addition or subtraction skills mastered to this point. Teacher note: Use the five-step method, student's page 42.	Sam has 182 baseball trading cards and Jerry has 234 base baseball cards. How many more has Jerry? 52
6. Mixed Practice.	
7. In-Depth.	

Textual Resources	Related Resources	Notes
Addition and Subtraction		
2. HM Book 4, pp. 10, 11, 32-34, 43	HM Masters 4 (10)	
3. HM Book 4, pp. 31, 41	HM Visuals 4 (4) HM Masters 4 (7)	
4. HM Book 4, pp. 46-54, 64	HM Visuals 4 (5, 6) HM Masters 4 (11, 12)	
5. HM Book 4, pp. 40, 42, 43	HM Masters 4 (10)	
6. HM Book 4, pp. 55, 63, 64, 91	HM Masters 4 (12, 20)	
7. HM Book 4, p. 65		

LEVEL E

MULTIPLICATION AND DIVISION



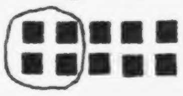
Review of Level D Skills	Example Multiplication and Division
1. Uses successive addition to solve multiplication problems for a one-place number times a one, two or more place number.	Find the missing numbers. $19 + 19 + 19 = \boxed{57}$ $3 \times 19 = \boxed{57}$
2. Knows the multiplication and division combinations 6 through 9. Timed Test. Mastery not expected until near end of year.	Find the products or quotients. $8 \times 5 = \boxed{40}$ $48 \div 6 = \boxed{8}$ $6 \times 8 = \boxed{48}$ $35 \div 7 = \boxed{5}$ $7 \times 9 = \boxed{63}$ $64 \div 8 = \boxed{8}$
3. Uses the commutative, associative and distributive properties to simplify multiplication.	Solve the equation. $\boxed{8} \times 3 = 3 \times 8$ Draw a circle around the equation which shows the commutative property. $8 \times 5 = 2 \times (4 \times 5)$ $8 \times 5 - 5 \times 8$ $8 \times 5 = 40$
4. Uses the multiplication and division rule to find the unknown member of an ordered number pair when given one of the members. Finds cross products.	Name the multiplication or division rule. Then complete the number pairs in each set. {(1,6), (3,18), (7, 42), (6,a), (9,b), (4,c), (2,d)} x 6
5. Performs multiplication with a one digit factor times a two or more digit factor.	Write the products. $28 \times 8 = 224$ $18 \times 6 = 108$

Textual Resources	Related Resources	Notes
Multiplication and Division		
Review		
1. HM Book 4, pp. 94, 95	HM Masters 4 (21)	
2. HM Book 4, pp. 104-107, 109, 160, 179	HM Masters 4 (25, 26, 47)	
3. HM Book 4, pp. 97-99, 115, 116, 118, 125, 161, 162, 321	HM Visuals 4 (13, 18)	
4. HM Book 4, pp. 100-103, 112, 177, 238, 239	HM Visuals 4 (12, 23) HM Masters 4 (24, 27)	
5. HM Book 4, pp. 117-121, 124, 163, 164, 166, 224-226	HM Visuals 4 (13, 18) HM Masters 4 (29, 42, 43, 47, 58)	

LEVEL E	Example
Multiplication and Division	Multiplication and Division
6. Uses multiples of ten to extend known multiplication and division facts.	Find the products. $\begin{array}{r}17\\ \times\ 10\\ \hline 170\end{array}$ $\begin{array}{r}17\\ \times\ 100\\ \hline 1700\end{array}$ $\begin{array}{r}17\\ \times\ 1000\\ \hline 17000\end{array}$
7. Multiplies a two digit number by a two digit number.	Multiply. $\begin{array}{r}35\\ \times\ 27\\ \hline 245\\ 700\\ \hline 945\end{array}$
8. Shows that multiplication and division are inverse operations by using opposites to check.	Divide and check by multiplying. $7\overset{105}{\overline{)735}}$ 7 x 105 = 735
9. Uses the "ladder" or successive subtraction method to do division with a one digit divisor and one or more digit dividend, with no remainder.	Use the ladder method to find the quotient for $4\overline{)56}$ $\begin{array}{r\|l} 4\overline{)56} & \\ -\ 40 & 10\\ \hline 16 & \\ -\ 16 & 4\\ \hline 0 & \end{array}$
10. Uses the terms "dividend", "divisor", "quotient" and "remainder" to label parts of a division problem. Does division with remainders for one digit divisor and a one or two digit dividend.	Identify each numeral as divisor, dividend, quotient or remainder. 9 ÷ 2 = 4 1 dividend divisor quotient r Divide. $2\overset{29\ r1}{\overline{)59}}$
11. Solves word problems requiring multiplication or division skills mastered to this point. Teacher note: Use the five-step method, student's page 42.	Twenty-one children were put into three teams for a spelling bee. How many children were on each team? $3\overset{7}{\overline{)21}}$
12. Mixed Practice.	

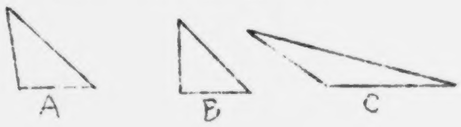
Textual Resources	Related Resources	Notes
Multiplication and Division		
6. HM Book 4, pp. 168, 169, 227	HM Masters 4 (44)	
7. HM Book 4, pp. 170-174, 228	HM Masters 4 (45, 46 58)	
8. HM Book 4, pp. 96, 108, 179	HM Masters 4 (22, 47, 51)	
9. HM Book 4, pp. 184, 185, 232, 234, 235	HM Visuals 4 (19) HM Masters 4 (50, 60)	
10. HM Book 4, pp. 180-183, 188, 189, 230, 231, 236	HM Masters 4 (48, 49, 59)	
11. HM Book 4, pp. 110, 111, 113, 122, 123, 168, 206, 213, 233, In-Depth p. 253	HM Masters 4 (28)	
12. HM Book 4, pp. 125, 147, 148, 176, 237		

LEVEL E	Example
Multiplication and Division	Multiplication and Division
13. In-Depth.	

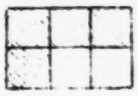
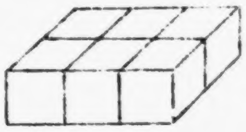
FRACTIONS	Fractions
Review of Level D Skills	
1. Uses the words "numerator" and "denominator" to identify parts of a fraction.	In the fraction 7/10: 7 is the numerator and 10 is the denominator.
2. Pictures fractions by constructing a model using a unit model or a set. Describes fractional part as _____ of _____ parts.	Draw a ring around 2/5 of this set.  Complete each equation. 1/4 of 12 = 3 1/10 of 80 = 8
3. Changes a given fraction to an equivalent fraction with the aid of pictures.	Solve the equation. $\frac{1}{2} = \frac{\boxed{2}}{4}$
4. Places >, < or = between two pictured fractions to show their relationship.	Put > or < in the ○. $\frac{2}{6} \textcircled{<} \frac{4}{6}$
5. Adds or subtracts fractions with the same denominator, with or without pictures.	Add or subtract the following: $\frac{4}{6} + \frac{1}{6} = \frac{\boxed{5}}{6}$ $\frac{4}{5} - \frac{3}{5} = \frac{\boxed{1}}{5}$

Textual Resources	Related Resources	Notes
Multiplication and Division		
13. HM Book 4, pp. 127, 191-205, 207, 210-212, 218-223, 229, 250-252, 254, 255, 271, 280-283, 287, 322, 325-329	HM Visuals 4 (20, 21) HM Masters 4 (30, 51-55, 57, 63, 69, 77, 79)	
Fractions		
HM Book 4, pp. 128-131	HM Visuals 4 (14-16) HM Masters 4 (31)	
1. HM Book 4, p. 132, 133	HM Masters 4 (32)	
2. HM Book 4, p. 150 problems 17-24		
3. HM Book 4, pp. 138-142, 158 problems 1-9, 304, 305	HM Visuals 4 (17) HM Masters 4 (35, 36)	
4. HM Book 4, pp. 300, 301	HM Visuals 4 (27)	
5. HM Book 4, pp. 134, 136, 137, 288-294 In-Depth pp. 324, 338, 340	HM Masters 4 (34, 70, 76)	

LEVEL E	Example
Fractions	Fractions
6. Mixed Practice.	
7. In-Depth.	

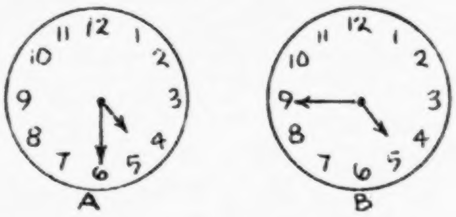
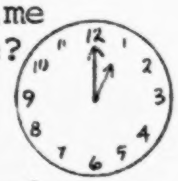
GEOMETRY	Geometry
Review of Level D Skills D Non-Metric Geometry 1 D Non-Metric Geometry 2 D Non-Metric Geometry 4 D Metric Geometry 1	
1. Illustrates by identifying: perpendicular lines, intersecting lines, parallel lines, end points and congruent line segments.	Which figure shows perpendicular lines?
*2. Identifies surfaces in the classroom or from pictures that represent a part of a plane or intersecting planes.	Name an object in the classroom that represents part of a plane.
3. Constructs regular closed surfaces (solids): cube, square, pyramid, cone, cylinder.	Using the pattern given, copy, cut out, and construct the figure.
4. Draws or identifies plane geometric figures for: equilateral triangle, right triangle, and quadrilateral, when the name is given and conversely.	Which figure is the picture of a right triangle? 

Textual Resources	Related Resources	Notes
Fractions		
6. HM Book 4, pp. 148, 316		
7. HM Book 4, pp. 135, 143-146, 150-154, 157-159, 295-299, 302, 303, 306-315, 317, 323	HM Visuals 4 (17) HM Masters 4 (33, 37-40, 71-75)	
Geometry		
Review		
HM Book 4, pp. 66, 67 HM Book 4, p. 71 HM Book 4, p. 75 HM Book 4, p. 266	HM Visuals 4 (7, 8, 26)	
1. HM Book 4, pp. 68, 69, 72-74, 77	HM Visuals 4 (8) HM Masters 4 (14, 15)	
2. HM Book 4, p. 70 In-Depth pp. 256-259	HM Visuals 4 (24) HM Masters 4 (64)	
3. HM Book 4, pp. 260-265	HM Visuals 4 (25) HM Masters 4 (65)	
4. HM Book 4, pp. 76, 77, 190, 286	HM Visuals 4 (8) HM Masters 4 (16)	

LEVEL E	Example
Geometry	Geometry
5. Uses a compass to draw a circle with a given radius. Identifies the diameter and radius of a given circle.	Use your compass to draw a circle with a 2" radius that has point A as its center.
6. Reads weights of designated objects in pounds and ounces on a scale. Uses conversion factors of: pound = 16 ounces, ton = 2,000 pounds. Converts miles to feet and vice versa, e.g., mile = 5,280 feet.	Teacher activity: Given the pictures of several objects, the student identifies the common units of weights associated with each object. Example: road distance-miles coal-ton person-pounds canned foods-ounces
*7. Uses linear measuring instruments for even centimeters and meters to measure objects in the classroom.	Use the meter stick to measure the length of the chalkboard.
8. Counts square units to determine the area of pictured regions.	Find the number of square units (area) in the shaded region. 
9. Measures the volume of a simple closed surface using counting cubes.	Find the number of cubic units (volume) for each figure. 
10. Uses a number pair to locate a point on a number plane or conversely.	Name the number pair for each point on the number plane.
11. Reads and makes simple line graphs, bar graphs, circle graphs and pictographs.	Using the information given, make a bar graph to show the temperatures at noon during the first week in May.

Textual Resources	Related Resources	Notes
Geometry		
5. HM Book 4, pp. 78, 79	HM Visuals 4 (9) HM Masters 4 (17)	
6.		
7.		
8. HM Book 4, pp. 88-90, 267	HM Visuals 4 (11, 26) HM Masters 4 (19)	
9. HM Book 4, pp. 268, 269	HM Visuals 4 (26)	
10. HM Book 4, pp. 84-87, 92, 272, 273	HM Visuals 4 (10) HM Masters 4 (18, 67)	
11. HM Book 4, pp. 126, 274-279, 284, 285	HM Masters 4 (68)	

LEVEL E	Example
Geometry	Geometry
*12. Solves word problems using skills learned to this point.	
13. In-Depth.	

TIME	Time
Review of Level D Skills	
1. Uses "morning", "afternoon", and "night" to describe part of the day. Uses 12:00 noon and 12:00 midnight as dividing times. Writes times using A.M. and P.M.	Write A.M. or P.M. to make a true statement. Some Saturday afternoon movies start at 2:00 P.M. .
2. Finds the number of minutes which have elapsed between two pictured minute hand readings for time differences up to 2 hours. Calculates the passage of time using knowledge of 60 minutes in an hour, 5 minutes between "dots".	How many minutes have passed between the time shown on clock A and clock B?  15 minutes
3. Solves simple problems to answer "What will the time be ..." and which require reading bus, train or plane schedules.	What will the time be 1 1/2 hours later than the time shown on this clockface? 

	Leaves N.Y.	Arrives Pbgh.
A	8:00 A.M.	9:00 A.M.
B	10:00 A.M.	11:00 A.M.

Plane A arrives in Pittsburgh at 9:00 A.M. .
Plane B leaves N.Y. at 10:00 A.M. .

Textual Resources	Related Resources	Notes
Geometry		
12. HM Book 4, pp. 82, 83, 186, 270 In-Depth pp. 93, 337	HM Masters 4 (66)	
13. HM Book 4, pp. 80, 81, 187, 241, 282, 335, 336, 339	HM Masters 4 (69, 80)	

Time		
Teacher note: TIME skills are interspersed with other skills; therefore, no pages have been keyed. Oral and written activities (such as have been used in the examples and for the test material) should be used so the student will be successful as these skills are encountered in the textbook.		

LEVEL E

Time

4. Identifies the second hand on a clock. Reads time on clockfaces that contain a second hand. States that there are 60 seconds in a minute.

5. Identifies units of the calendar: days, weeks and months; and states number of days in a week and number of days in each month. Completes calendars to identify "today's date", what day a particular date will be, etc. Solves word problems using a calendar. Writes any given date as month, day, and year or with numerals.

6. Completes addition and subtraction problmes involving two or three time units which require one or two regroupings. Include seconds, minutes, hours, days, weeks, months, and years. Specify use of 30 days in a month and 365 days in a year.

Example

Time

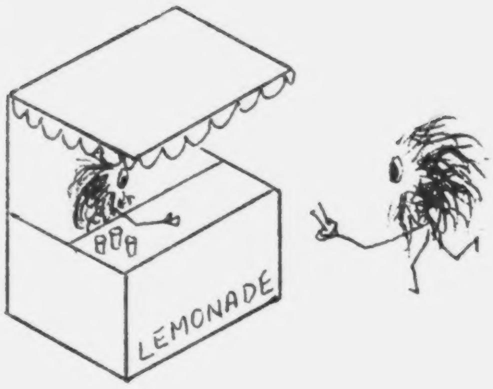
The time shown on this clock is ________ hours ________minutes ________ seconds.

Complete this calendar for May 1968.

1968			MAY			1968
S	M	T	W	T	F	S
			1			
		7				11
					17	
			22			
26						

Mary's mother baked a cake on Saturday. It took 25 minutes to mix, 50 minutes for the cake to bake. It took 1 hour and 10 minutes for the cake to cool and 15 minutes to frost the cake. How long did Mary's mother spend making the cake? 2 hours 40 minutes

Textual Resources	Related Resources	Notes
Time		



LEVEL E MONEY	Example Money
Review	
1. Identifies the change in coins which would be received in making single purchases costing up to $10.00.	Circle the coins which you would receive as change if you bought a pair of skates for $2.97, and gave the sales clerk $5.00.
2. Adds (two or more addends) and subtracts money values, using cent notation (¢) and decimal notation (.), and dollar notation ($). Problems written in horizontal or vertical form.	Find the sums and differences. $ .82 1.56 .98 $3.36 $ .82 - .57 $ .25
*3. Indicates the change in coins which would be received from $10.00 for purchases which amount to less than $10.00. Counts out the change starting with the total value of the purchases.	Marla bought a baseball pennant for 39¢, a windup dog for 78¢ and a baseball beanie for $1.65. Count out the change that Marla got from a ten-dollar bill.
4. Solves one and two step verbal (word) problems and nonverbal problems involving skills learned to this point.	Mary bought a skirt for $5.98 and a blouse for $3.95. She gave the clerk $10.00. How much change will she get?
5. Mixed Practice.	

Textual Resources	Related Resources	Notes
Money		
1. HM Book 4, pp. 58, 59		
2. HM Book 4, p. 60, 61	HM Masters 4 (13)	
3.		
4. HM Book 4, pp. 114, 165, 167, 175		
5. HM Book 4, p. 156		

LEVEL E

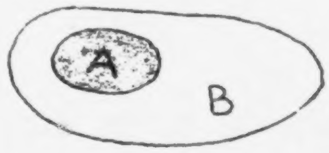
SPECIAL TOPICS

*1. Interprets set-subset statements using terms' "all", "some", "none", and "if then".

Example

Special Topics

Use the diagram. Write T or F to show whether each statement is true or false.



All the objects in A are in B. __________

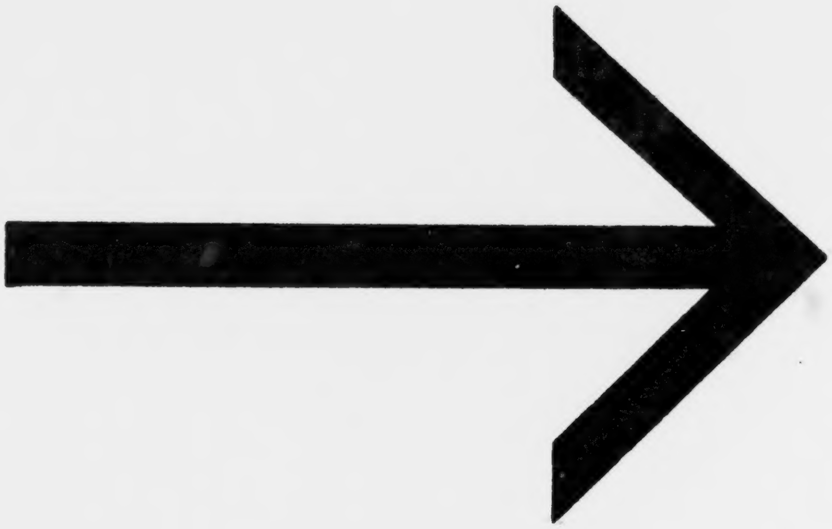
Textual Resources	Related Resources	Notes
Special Topics		
1. HM Book 4, pp. 242-249	HM Masters 4 (61)	

LEVEL E

TESTS

and

ANSWER KEYS



LEVEL E

NUMERATION

Skill 1, 2 (Page 1 of 2 pages)

Name ______________________

Date ______________________

Fill in the blanks in this sequence.

1. 624,327; ________; ________; 624,330; ________; ________; 624,333

2. 999,994; ________; ________; ________; ________; ________; 1,000,000

3. 253,839; ________; ________; ________; ________; ________; 253,845

4. 253,108; ________; ________; ________; ________; ________; 253,114

5. 207,898; ________; ________; ________; ________; ________; 207,904

Write the number words or the number for the following:

1. Seventy-five 1. ______________________

2. 628 2. ______________________

3. 950 3. ______________________

4. Eight thousand, three hundred, twenty-five 4. __________

5. 3002 5. ______________________

LEVEL E Name ____________________

NUMERATION Date ____________________

Skill 1, 2 (Page 2 of 2 pages)

Give the place value of the underlined digit.

1. $69\underline{5},643$ 1. ____________________

2. $9\underline{2}6,408$ 2. ____________________

3. $\underline{5}67,904$ 3. ____________________

4. $7\underline{9}6,713$ 4. ____________________

5. $\underline{1},520,427$ 5. ____________________

Write these numbers in expanded notation.

1. 8,260 = ______+______+______+______

2. 182,952 = ______+______+______+______+______+______

Write the following using number words.

3. 503,762 ____

4. 1,025,700 ____

Complete the place value chart.

	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
476,393						
109,006						

LEVEL E

NUMERATION

Skill 3

Name ______________________

Date ______________________

Use > or < in the ○

1. 6,280 ○ 4,280

2. 836,420 ○ 83,432

3. 809,604 ○ 809,640

4. 44,952 ○ 43,952

5. 389,420 ○ 389,412

6. 763,982 ○ 736,982

7. 286,589 ○ 286,598

8. 572,361 ○ 572,631

9. 998,723 ○ 989,723

10. 289,767 ○ 273,767

LEVEL E

NUMERATION

Skill 4

Name ______________________

Date ______________________

Write the Roman numeral or Arabic base 10 numeral for the following:

1. 9 ______________________

2. 44 ______________________

3. 12 ______________________

4. 18 ______________________

5. XIX ______________________

6. MCMLXX ______________________

7. 500 ______________________

8. L ______________________

9. 20 ______________________

10. 1000 ______________________

LEVEL E | Name ____________________

NUMERATION | Date ____________________

In-Depth (Odd and Even Numbers)

If the operations below are done, will the answers be odd or even?

	ODD	EVEN
1. Even + Even =	_____	_____
2. Even x odd =	_____	_____
3. Even - odd =	_____	_____

4. Select the letter of the rule that applies to the example

   11 - 2 = 9.

   (a) odd - odd = odd
   (b) odd - odd = even
   (c) odd - even = odd
   (d) odd - even = even

4. ________________

5. Give an example for the rule "an odd number minus an odd number equals an even number."

5. ________________

LEVEL E

ADDITION AND SUBTRACTION

Skill 1

Name ______________________________

Date ______________________________

Fill in the missing addend.

1. _____ + 45 = 45 + 445

2. 250 + 50 = 50 + _____

3. _____ + 21 = 21 + 230

Select the equations which show the commutative principle.

4. a. 39 + 253 = 253 + 39
   b. 39 + 200 + 50 + 3 = 292
   c. 39 + 253 = 39 + 253

5. a. 300 + 72 + 37 = 372 + 37
   b. 372 + 37 = 409
   c. 372 + 37 = 37 + 372

6. a. 90 + 54 = 90 + 50 + 4
   b. 90 + 54 = 144
   c. 90 + 54 = 54 + 90

Complete the equations.

7. 8 + 7 = 8 + (2+5)
   = (8+__) + 5
   = __ + 5
   = ________

8. 9 + 9 = 9 + (1+8)
   = (9+__) + 8
   = __ + 8
   = ______

9. (6+3) - 3 = 6 + (3-3) = ___

10. 5 + 7 - 7 = 5 + (__ - 7)=___

LEVEL E Name ______________________

ADDITION AND SUBTRACTION Date ______________________

Skill 2

Write each sentence as a number sentence.

1. 5 is greater than 4.

____

2. 863 is less than 922.

____

3. 500 + 40 + 6 and 546 name the same number.

____

4. The sum of 8 and 6 is greater than the sum of 9 + 4.

____

Write $>$, $<$, or $=$ in the ○.

5. 8 + 2 ○ 3 + 7

6. 6 + 6 ○ 9 + 4

7. 18 - 7 ○ 6 + 9

8. 4 + 6 ○ 6 - 4

9. 0 + 5 ○ 5 + 0

10. 8 - 3 ○ 3 + 1

LEVEL E Name ______________________

ADDITION AND SUBTRACTION Date ______________________

Skill 3

Use the rule to complete each set of number pairs.

1. The second number is 5 greater than the first.

(1, __), (2,__), (3,__), (4,__), (5,__), (6,__)

2. The second number is 8 less than the first.

(8,__), (9,__), (10,__), (11,__), (12,__), (13,__)

3. The second number is 9 greater than the first.

(__,10), (__,11), (__,12), (__,13), (__,14), (__,15)

4. The second number is 5 less than the first.

(__,7), (__,8), (__,9), (__,10), (__,11), (__,12)

5. The second number is 6 less than the first.

(18,__), (17,__), (16,__), (15,__), (14,__), (13,__)

Complete the number pairs in each set.

6. (6,3), (8,5), (7,__), (9,__), (3,__), (5,__), (10,__), (11,__)

7. (3,3), (4,4), (5,__), (6,__), (7,__), (8,__), (9,__), (10,__)

8. (5,11), (6,12), (7,__), (8,__), (9,__), (4,__), (3,__), (2,__)

9. (3,12), (5,14), (2,11), (5,__), (4,__), (8,__), (6,__), (0,__)

10. (7,3), (8,4), (9,5), (__,6), (__,7), (__,8), (__,9), (__,2)

LEVEL E

ADDITION AND SUBTRACTION

Skill 4

Name ______________________________

Date ______________________________

Add.

14,965
+26,638

94,382
+6,439

17,065
+19,374

87,682
+19,507

3,954
4,163
+5,002

9,246
3,052
+ 941

Subtract.

43,521
-4,789

35,678
-9,780

5,500
-1,679

60,001
-6,789

LEVEL E

ADDITION AND SUBTRACTION

Skill 5 (Page 1 of 2 pages)

Name ______________________

Date ______________________

Solve the problems. Label.

1. The fifth and sixth grades sold 589 pencils; the third and fourth grades sold 600 pencils and the first and second grades sold 450 pencils. How many pencils did all the children sell together?

1. ____________

2. Mary's room was collecting bottle caps for the math class. They collected 360 on Monday, 398 on Tuesday, and 1,000 on Wednesday. How many bottle caps did they collect on Tuesday and Wednesday?

2. ____________

3. John was saving popsicle sticks. He collected 200 the first week, 370 the next week, and 210 the next. How many sticks did he have then?

3. ____________

4. Mary sold 66 cookies on Thursday, 182 on Friday and 378 on Saturday. Susan sold a total of 750 cookies. How many cookies did the 2 girls sell?

4. ____________

5. Jim saved $16.35 in one year, $23.52 the next and $126.78 the third year. How much money does he have now?

5. ____________

LEVEL E

Name ____________________

ADDITION AND SUBTRACTION

Date ____________________

Skill 5 (Page 2 of 2 pages)

Solve the problems.

6. There were 812 birds in the park. There were 201 redbirds, 199 bluebirds, 87 pigeons and 4 parrots and the rest were robins. How many robins were in the park?

6. ____________

7. There were 962 pupils in school. 507 were boys. How many girls were there?

7. ____________

8. If your heart beats 70 times a minute when you are sitting down and 120 times a minute when you are walking, how much faster does it beat when you walk?

8. ____________

9. Mr. Brown's music class collected 543 old records. 296 of these records were jazz records and 165 were folk songs, the rest were patriotic. How many patriotic records?

9. ____________

10. There were 900 people at the tulip festival. 317 were men, 450 were women, how many children were there at the tulip festival?

10. ____________

LEVEL E

MULTIPLICATION AND DIVISION

Skill 1

Name ______________________

Date ______________________

Name the missing numerals.

1. 9 + 9 + 9 + 9 + 9 + 9 = _____
6 x 9 = _____

2. 10 + 10 + 10 + 10 + 10 + 10 = ____
6 x 10 = ____

3. 81 + 81 + 81 + 81 + 81 + 81 = ____
6 x 81 = ____

4. 79 + 79 + 79 + 79 + 79 = _____
5 x 79 = _____

5. 93 + 93 + 93 + 93 = ____
4 x 93 = ____

6. 5 + 5 + 5 + 5 + 5 = ____
5 x 5 = ____

7. 64 + 64 + 64 = _____
3 x 64 = _____

8. 54 + 54 + 54 + 54 = ____
4 x 54 = ____

9. 29 + 29 + 29 = _____
3 x 29 = _____

10. 46 + 46 + 46 + 46 = ____
4 x 46 = ____

LEVEL E   Name ______________________

MULTIPLICATION AND DIVISION   Date ______________________

Skill 2 (Page 1 of 2 pages)

Timed: 4 minutes

Name the products.

$$\begin{array}{ccccccccc} 8 & 2 & 1 & 0 & 1 & 7 & 8 & 1 & 7 \\ \underline{2} & \underline{6} & \underline{8} & \underline{6} & \underline{9} & \underline{2} & \underline{1} & \underline{9} & \underline{9} \end{array}$$

$$\begin{array}{ccccccccc} 2 & 6 & 9 & 9 & 2 & 7 & 1 & 0 & 6 \\ \underline{7} & \underline{1} & \underline{1} & \underline{7} & \underline{8} & \underline{1} & \underline{6} & \underline{7} & \underline{9} \end{array}$$

$$\begin{array}{ccccccccc} 1 & 6 & 0 & 9 & 0 & 6 & 2 & 7 & 5 \\ \underline{7} & \underline{5} & \underline{8} & \underline{2} & \underline{9} & \underline{2} & \underline{9} & \underline{3} & \underline{7} \end{array}$$

$$\begin{array}{ccccccccc} 6 & 9 & 3 & 6 & 5 & 7 & 3 & 6 & 3 \\ \underline{3} & \underline{9} & \underline{7} & \underline{4} & \underline{9} & \underline{7} & \underline{8} & \underline{6} & \underline{9} \end{array}$$

$$\begin{array}{ccccccccc} 7 & 4 & 5 & 9 & 9 & 5 & 4 & 8 & 8 \\ \underline{5} & \underline{6} & \underline{8} & \underline{5} & \underline{3} & \underline{6} & \underline{7} & \underline{5} & \underline{8} \end{array}$$

$$\begin{array}{ccccccccc} 4 & 7 & 8 & 8 & 7 & 6 & 9 & 8 & 7 \\ \underline{9} & \underline{4} & \underline{6} & \underline{3} & \underline{6} & \underline{7} & \underline{4} & \underline{9} & \underline{8} \end{array}$$

$$\begin{array}{ccccccccc} 9 & 8 & 6 & 9 & 8 & 6 & 9 & 7 & 4 \\ \underline{8} & \underline{4} & \underline{8} & \underline{6} & \underline{7} & \underline{0} & \underline{3} & \underline{0} & \underline{8} \end{array}$$

LEVEL E

MULTIPLICATION AND DIVISION

Name ______________________

Date ______________________

Skill 2 (Page 2 of 2 pages)

Timed: 3 minutes

Name the quotients.

$7\overline{)63}$ $8\overline{)56}$ $8\overline{)64}$ $9\overline{)27}$ $7\overline{)35}$ $9\overline{)54}$

$8\overline{)16}$ $2\overline{)14}$ $3\overline{)18}$ $5\overline{)35}$ $4\overline{)36}$ $4\overline{)28}$

$6\overline{)24}$ $9\overline{)81}$ $6\overline{)30}$ $1\overline{)6}$ $2\overline{)12}$ $8\overline{)72}$

$3\overline{)21}$ $8\overline{)40}$ $6\overline{)48}$ $3\overline{)24}$ $5\overline{)45}$ $6\overline{)42}$

$2\overline{)18}$ $9\overline{)63}$ $7\overline{)56}$ $3\overline{)27}$ $6\overline{)54}$ $7\overline{)49}$

$6\overline{)36}$ $5\overline{)40}$ $9\overline{)72}$ $9\overline{)36}$ $7\overline{)28}$ $8\overline{)32}$

$4\overline{)36}$ $7\overline{)21}$ $8\overline{)56}$ $7\overline{)0}$ $5\overline{)30}$ $1\overline{)9}$

$7\overline{)35}$ $4\overline{)32}$ $6\overline{)18}$ $7\overline{)14}$ $9\overline{)18}$ $7\overline{)42}$

LEVEL E

MULTIPLICATION AND DIVISION

Name ______________________________

Date ______________________________

Skill 3

Draw a circle around the equation which shows the commutative principle.

1. ⓐ 3 x 8 = 24
   ⓑ 3 x 8 = 4 x (3x2)
   ⓒ 3 x 8 = 8 x 3

2. ⓐ 3 x 30 = 3 x (3 x 10)
   ⓑ 6 x 9 = 9 x 6
   ⓒ 9 x 6 = 54

Supply the missing factors.

3. 8 x 3 = _____ x 8

4. 9 x _____ = 7 x 9

Complete the equations.

5. (7 x 4) + (7 x 3)
   = ___ + ___
   = _____

6. (6 x 3) + (4 x 3)
   = (6 + 4) x ___
   = ____ x 3
   = _____

7. 3 x (3 x 6) = (3 x 3) x ___
   = ___ x 6
   = _____

8. (__ x 20) x 4 = 3 x (20 x 4)
   = 3 x ___
   = _____

9. 42 x 3 = (40 + __) x 3
   = (40 x 3) + (2 x 3)
   = ___ + ___
   = _____

10. 5 x 70 = 5 x (7 x 10)
   = (5 x __) x 10
   = ___ x 10
   = _____

LEVEL E

Name ________________________________

MULTIPLICATION AND DIVISION

Date ________________________________

Skill 4

Name the multiplication rule. Then complete the number pair in each set.

1. {(6, 36), (3, 18), (7,__), (9,__), (4,__)}

   Rule: ____

2. {(63, 7), (27, 3), 54,__), (72,__), (45,__)}

   Rule: ____

3. {(21, 3),(35, 5), (49,__), (28,__), (63,__)}

   Rule: ____

4. {(3,24), (7,56), (4,__), (9,__), (6,__)}

   Rule: ____

5. {(1,5), (3,15), (9,__), (7,__), (6,__)}

   Rule: ____

6. {(7,70), (9,90), (36,__), (20,__), (78,__)}

   Rule: ____

7. {(20,5), (4,1), (24,__), (40,__), (36,__)}

   Rule: ____

8. {(24,4), (36,6), (54,__), (42,__), (48,__)}

   Rule: ____

9. {(4,28), (3,21), (6,__), (8,__), (5,__)}

   Rule: ____

10. {(90,9), (50,5), (120,__), (270,__), (390,__)}

    Rule: ____

LEVEL E

MULTIPLICATION AND DIVISION

Skill 5

Name ______________________________

Date ______________________________

Name the products.

27 5	29 4	38 3	85 4	94 3
19 4	68 6	37 7	29 9	76 4
549 2	328 3	864 8	983 7	7546 9
783 5	958 7	569 7	7193 8	64308 5

LEVEL E

MULTIPLICATION AND DIVISION

Name ______________________

Date ______________________

Skill 6

Find the products.

3 x 7 = _____

3 x 70 = _____

3 x 700 = _____

3 x 7000 = _____

4 x 8 = _____

4 x 80 = _____

4 x 800 = _____

4 x 8000 = _____

Name the products.

48 10	56 1000	67 90	36 50
83 20	59 100	82 60	87 10,000

LEVEL E

MULTIPLICATION AND DIVISION

Name ______________________

Date ______________________

Skill 7

Name the products.

94 35	88 88	46 24	62 17	73 29
39 26	68 39	47 81	57 57	99 58

LEVEL E　　　　　　　　　Name ______________________________

MULTIPLICATION AND DIVISION　　Date ______________________________

Skill 8, 9

Use the "ladder" method to find the quotients.
Check by multiplying.

$4\overline{)44}$　　　　$6\overline{)72}$　　　　$9\overline{)99}$

$7\overline{)91}$　　　　$5\overline{)90}$　　　　$3\overline{)39}$

$9\overline{)171}$　　　　$4\overline{)112}$

$8\overline{)184}$　　　　$9\overline{)261}$

LEVEL E

MULTIPLICATION AND DIVISION

Skill 10

Name ______________________________

Date ______________________________

Label the parts.

a) ______________________________

b) ______________________________

c) ______________________________

d) ______________________________

$$\begin{array}{rr} & \text{a)}\rightarrow 5 \\ \text{b)}\rightarrow 4 & \overline{)\;23}\leftarrow\text{c)} \\ & \underline{20} \\ & 3\leftarrow\text{d)} \end{array}$$

Name the quotients and remainders.

$6\overline{)52}$ $2\overline{)49}$ $8\overline{)65}$ $7\overline{)67}$ $9\overline{)84}$

$8\overline{)61}$ $6\overline{)45}$ $9\overline{)94}$ $7\overline{)31}$ $7\overline{)68}$

LEVEL E

MULTIPLICATION AND DIVISION

Skill 11 (Page 1 of 2 pages)

Name ______________________________

Date ______________________________

Solve the problems. Label.

1. If there are 35 marbles in each bag, how many marbles would you have if you were given 56 bags of marbles?

1. ____________________

2. If there are 4 quarts in each gallon, how many gallons are there in 2,344 quarts?

2. ____________________

3. Sara had 42 cents when she went shopping. She needed pencils. If she paid 6 cents for each pencil, how many pencils could she buy?

3. ____________________

4. There are 30 days in November and 24 hours in each day. How many hours are there in November?

4. ____________________

5. The coach asked 56 boys to line up in rows of 7. How many rows did they have?

5. ____________________

LEVEL E

MULTIPLICATION AND DIVISION

Skill 11 (Page 2 of 2 pages)

Name ______________________

Date ______________________

6. Mary brought 35 suckers to the party.

   a. How many suckers will each child get if there are 16 children at the party?

   a. __________

   b. How many suckers will be left?

   b. __________

7. If 11 people could ride in one bus, how many could ride in 12 buses?

7. __________

8. If there are 5 boxes each containing 6 balls and 7 boxes each containing 7 balls, how many balls are there in all?

8. __________

9. At the carnival Sally spent 85¢ for 5 rides on the ferris wheel. How much did one ride cost if all rides cost the same?

9. __________

10. There are 480 windows to be washed and 6 men to wash them. How many windows will each man have to clean?

10. __________

LEVEL E

FRACTIONS

Skill 1, 3

Name ____________________________

Date ____________________________

1. In the fraction $\frac{3}{5}$

____ is the numerator

____ is the denominator

2. In the fraction $\frac{8}{10}$

____ is the denominator

____ is the numerator

3. In the fraction $\frac{7}{9}$

_____ is the numerator

_____ is the denominator

4. In the fraction $\frac{9}{10}$

9 is the __________________

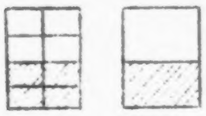
10 is the __________________

5. In the fraction $\frac{16}{24}$

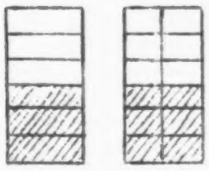
24 is the ______________________________

16 is the ______________________________

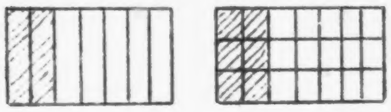
Complete each equation.



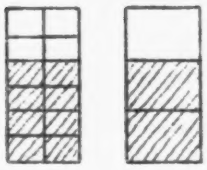
1. $\frac{4}{8} = \frac{\square}{2}$



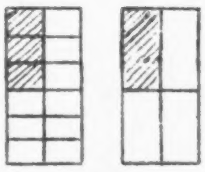
2. $\frac{3}{6} = \frac{\square}{12}$



3. $\frac{2}{7} = \frac{6}{\square}$



4. $\frac{8}{12} = \frac{\square}{3}$



5. $\frac{3}{12} = \frac{1}{\square}$

LEVEL E

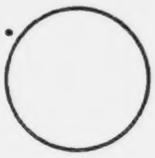
FRACTIONS

Skill 2

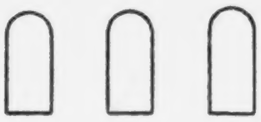
Name ____________________________

Date ____________________________

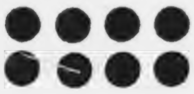
1. Shade $\frac{1}{4}$ of the circle.



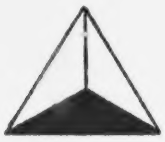
2. Draw a ring around $\frac{2}{3}$ of the set.



3. Circle $\frac{3}{4}$ of the balls.

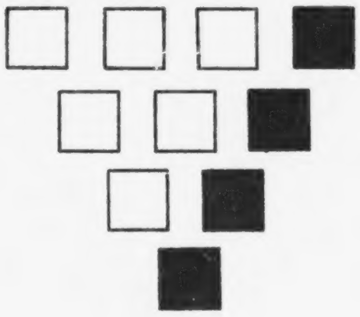


4. Write a fraction to tell the part of the region that is shaded.



4. ____________

5. Write a fraction to tell what part of this set is shaded.



5. ____________

Complete each equation.

1. $\frac{1}{3}$ of 15 = ____________

3. $\frac{1}{4}$ of 24 = ____________

2. $\frac{3}{4}$ of 36 = ____________

4. $\frac{3}{5}$ of 65 = ____________

5. 27 = ____________ of 81

LEVEL E

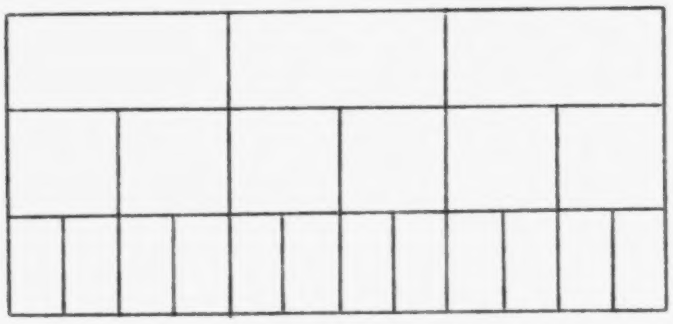
Name ______________________

FRACTIONS

Date ______________________

Skill 4, 5

Use the number rods to complete the number sentences. Write $>$, $<$ or = in the ○ .



1. $\frac{2}{6}$ ○ $\frac{2}{3}$

2. $\frac{8}{12}$ ○ $\frac{3}{6}$

3. $\frac{3}{6}$ ○ $\frac{3}{12}$

4. $\frac{2}{12}$ ○ $\frac{2}{6}$

5. $\frac{1}{3}$ ○ $\frac{2}{6}$

Solve the equations.

1. $\frac{3}{9} + \frac{3}{9} =$

2. $\frac{2}{10} + \frac{3}{10} =$

3. $\frac{5}{6} - \frac{3}{6} =$

4. $\frac{3}{6} + \frac{1}{6} + \frac{1}{6} =$

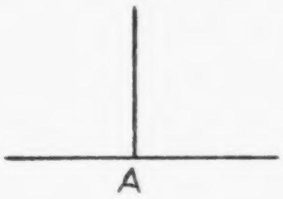
5. $\frac{5}{7} - \frac{3}{7} =$

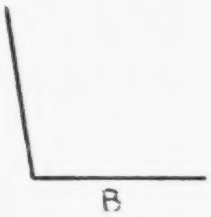
LEVEL E Name ____________________

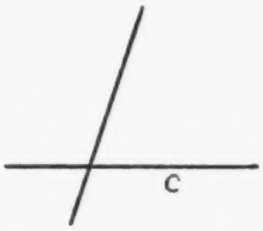
GEOMETRY Date ____________________

Skill 1 (Page 1 of 2 pages)

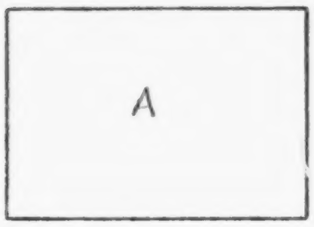
1. Which figure shows lines that are perpendicular? 1.__________

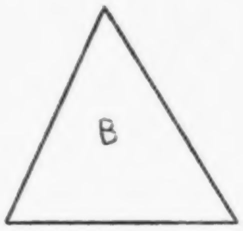


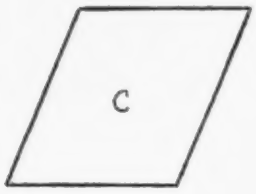




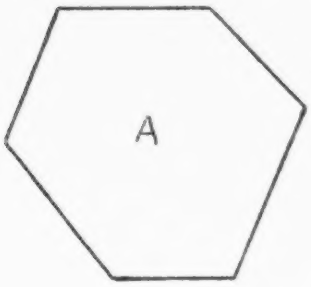
2. Which figure shows lines that are perpendicular? 2.__________

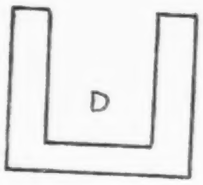


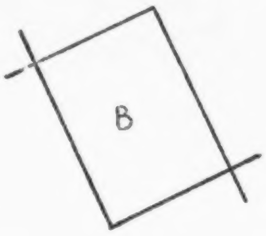


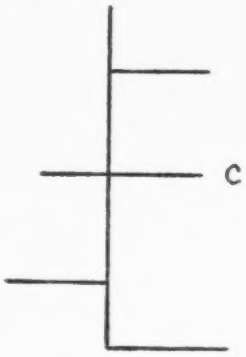


3. Which figure is not constructed of perpendicular lines? 3.______

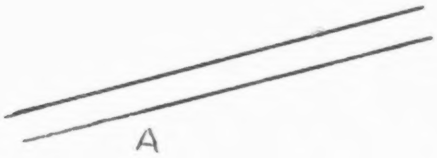


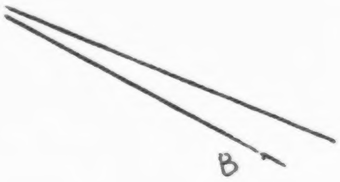




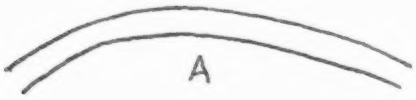


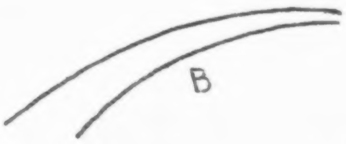
4. Which lines look as if they are parallel? 4.______





5. Which lines look as if they are parallel? 5.______





LEVEL E

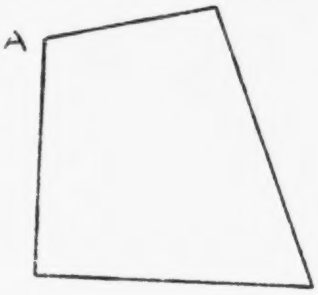
GEOMETRY

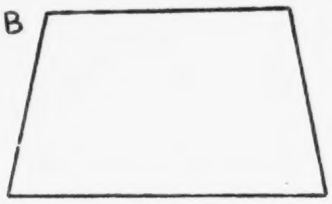
Skill 1 (Page 2 of 2 pages)

Name ______________________

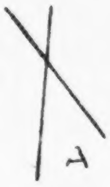
Date ______________________

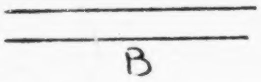
6. Which figure looks as if it had parallel lines? 6.____________





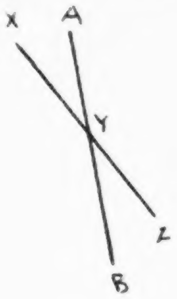
7. Which of the following figures show intersecting lines?





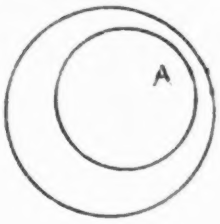
7.____________

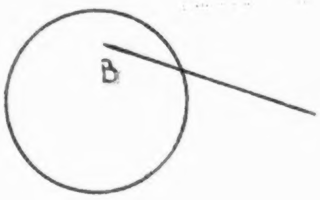
8. What is the name of the intersection of these two lines?



8.____________

9. Which of the following figures show intersecting lines?

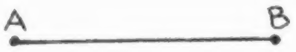


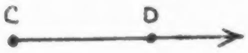


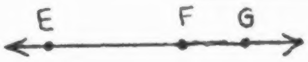
9.____________

10. Which of the following are congruent line segments?

10. ____________







LEVEL E

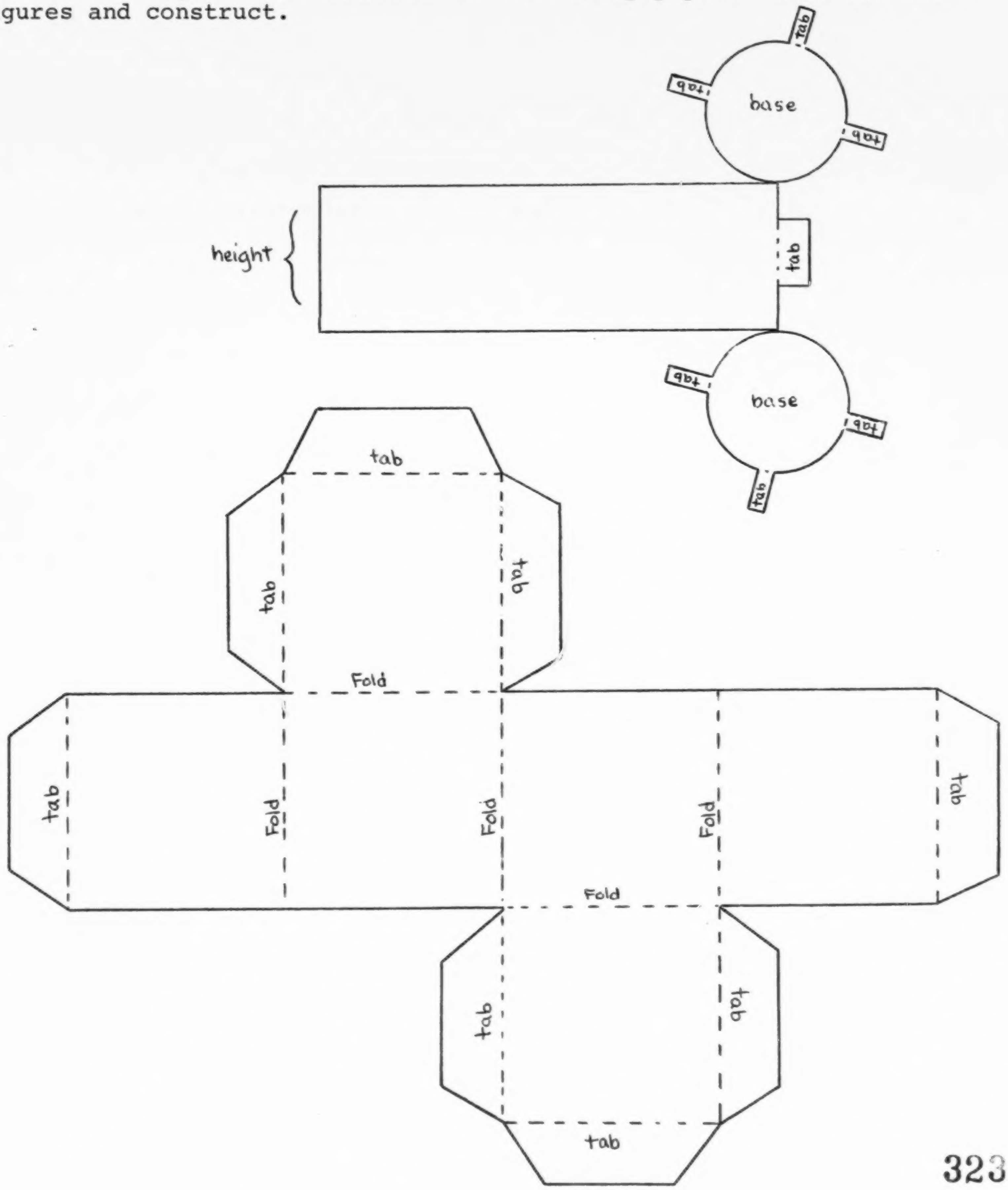
GEOMETRY

Skill 3

Name ______________________

Date ______________________

Cut out the figures and transfer them to heavy paper. Then cut out figures and construct.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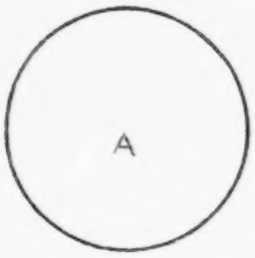
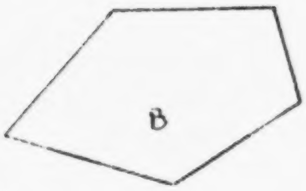
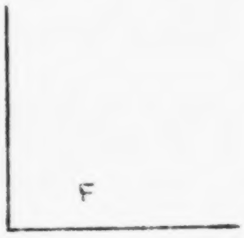
LEVEL E Name ____________________

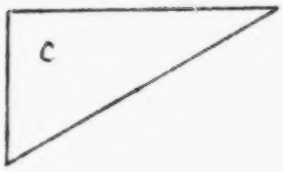
GEOMETRY Date ____________________

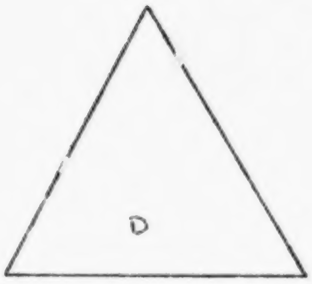
Skill 4

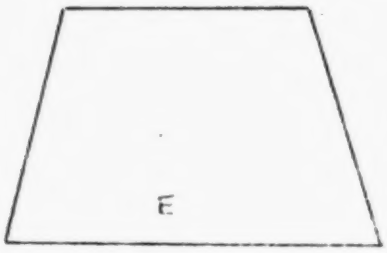












1. Of the figures above, which figure is the picture of an equilateral triangle?

1. ________________

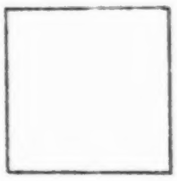
2. Of the figures above, which figure is the picture of a right triangle?

2. ________________

3. Of the figures above, which figure is the picture of a quadrilateral?

3. ________________

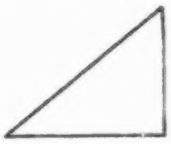
4. What is the name of this figure?



a. equilateral triangle
b. quadrilateral
c. right triangle

4. ________________

5. What is the name of this figure?



a. equilateral triangle
b. right triangle
c. quadrilateral

5. ________________

LEVEL E — Name ____________________

GEOMETRY — Date ____________________

Skill 5 (Page 1 of 2 pages)

1. Use your compass to draw a circle with a $1\frac{1}{2}$ inch radius that has point B as its center. You may need to use your ruler to get the right measurement on your compass.

2. Use your compass to draw a circle with a diameter of 2 inches.

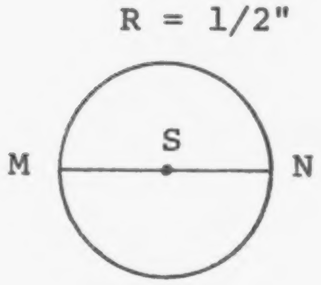
LEVEL E Name ____________________

GEOMETRY Date ____________________

Skill 5 (Page 2 of 2 pages)

Measure each radius and diameter in inches.

3.

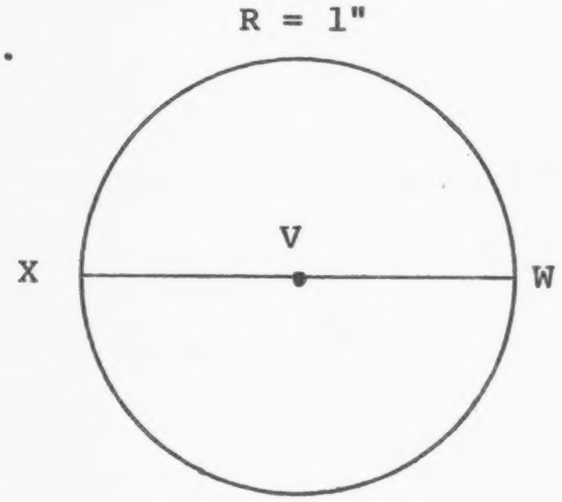


$m(\overline{MS}) =$ _____

$m(\overline{SN}) =$ _____

$m(\overline{MN}) =$ _____

4.



$m(\overline{XV}) =$ _____

$m(\overline{VW}) =$ _____

$m(\overline{XW}) =$ _____

5. The length of a diameter of a circle is ______________ times the length of a radius of a circle.

LEVEL E

GEOMETRY

Skill 6

Name ______________________

Date ______________________

Give the missing numbers.

1. 2 pounds = _____ ounces.

2. 1 ton = _____ pounds

3. 5,280 ft. = _____ mile

4. 6,000 lb. = _____ tons

5. If a turkey weighs 24 pounds and 7 ounces, how many ounces does it weigh?

5.______________

6. If a car weighs 1 ton and 1287 pounds, how many pounds does it weigh?

6.______________

7.
```
  2 tons 900 pounds
 +1 ton 1300 pounds
 __________________
                     =
```

8.
```
  1 mile    756 feet
 +3 miles  4524 feet
 ___________________
                     =
```

9.
```
  4 pounds  10 ounces
 -1 pound   14 ounces
 ____________________
```

10.
```
  3 tons  456 pounds
 -1 ton   983 pounds
 ___________________
```

LEVEL E

GEOMETRY

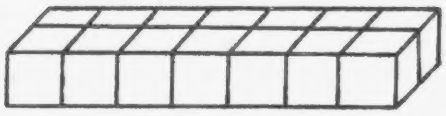
Skill 8, 9

Name ____________________

Date ____________________

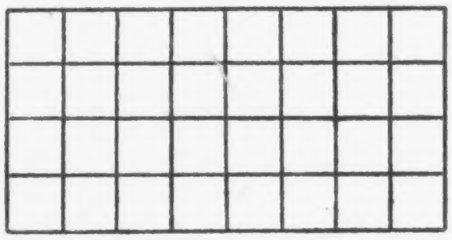
Give the surface area of each figure. Use square units.

1.



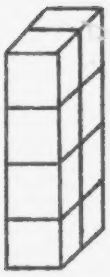
1. ________

2.



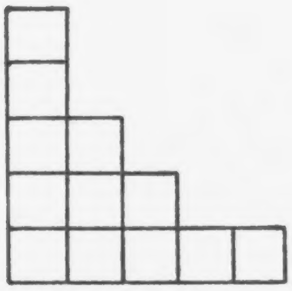
2 ________

3.



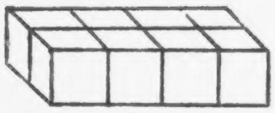
3. ________

4.



4 ________

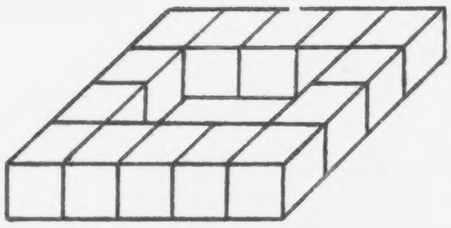
5.



5. ________

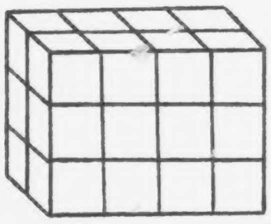
Give the volume of each figure. Use cubic units.

6.



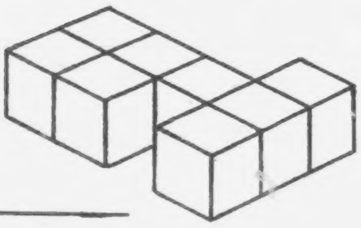
6. ________

7.



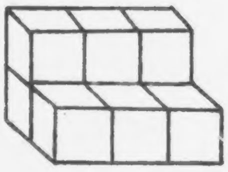
7. ________

8.



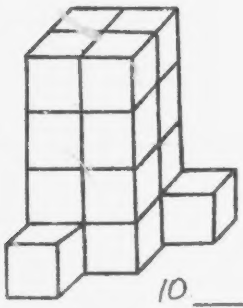
8. ________

9.



9. ________

10.



10 ________

LEVEL E   Name ______________________

GEOMETRY   Date ______________________

Skill 10

Use the number plane to write each of the words as a set of number pairs.

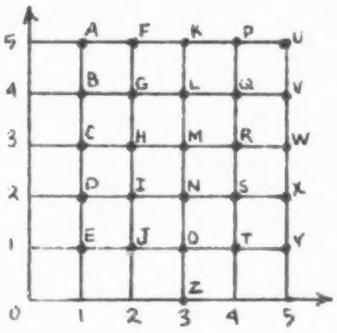
1. TURTLE ______________________________

2. GROVE ______________________________

3. MONKEY ______________________________

4. SURF ______________________________

5. GARGLE ______________________________


A F K P U
B G L Q V
C H M R W
D I N S X
E J O T Y
Z
0
1
2
3
4
5

Use the number plane to name the words.

1. (4,5), (3,4), (1,5), (5,1) ______________________________

2. (3,1), (1,3), (1,1), (1,5), (3,2) ______________________________

3. (2,3), (1,5), (4,5), (4,5), (5,1) ______________________________

4. (1,3), (3,1), (4,4), (5,5), (2,2), (3,2), (1,5) ______________________________

5. (1,3), (2,3), (4,3), (2,2), (4,2), (4,1), (3,3), (1,5), (4,2)

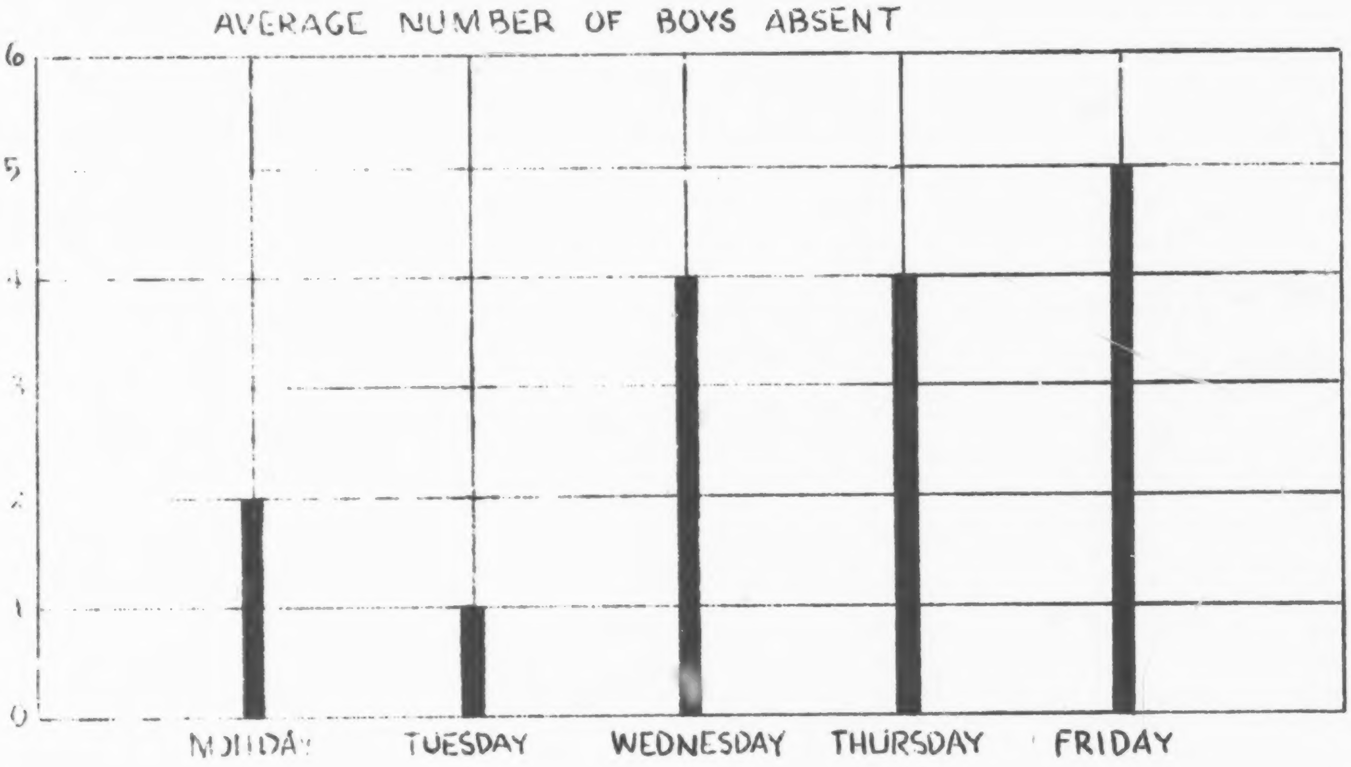
____

LEVEL E Name ______________________

GEOMETRY Date ______________________

Skill 11 (Page 1 of 2 pages)

Graph for problems 1 through 3:



1. On which day do we find the most number of boys absent?

1. ____________________

2. On which day do we find the least number of boys absent?

2. ____________________

3. Which two days do we find the number of absences to be equal?

3. ____________________

LEVEL E

GEOMETRY

Skill 11 (Page 2 of 2 pages)

Name ______________________

Date ______________________

4. Make a pictograph showing the following information:

Monday 1

Tuesday 0

Wednesday 2

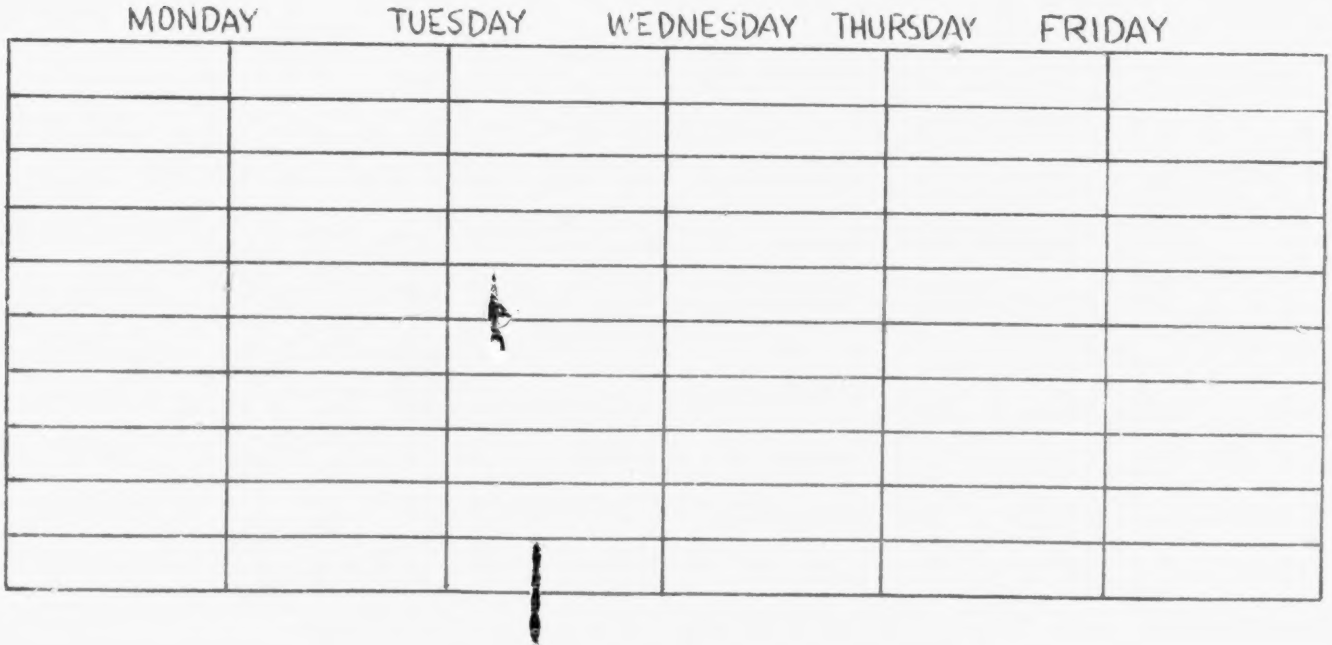
Thursday 4

Friday 6

Number of Televisions Sold in
One Week

5. Make a line graph illustrating Jack's spelling test scores.

95% 30% 75% 80% 100%



LEVEL E Name ______________________________

TIME Date ______________________________

Skill 1, 2 (Page 1 of 2 pages)

Choose the correct answer.

1. Many schools start at 8:00 __________.

   a. A.M.

   b. P.M.

2. We celebrate New Year's Eve on December 31st.
   The New Year starts at ____________.

   a. noon

   b. midnight

3. Sam's plane from New York left at 2:30 A.M.

   Did he go to the airport in the middle of the afternoon
   or in the middle of the night?

   ____

4. Some Saturday afternoon movies start at 2:00 o'clock.

   a. A.M.

   b. P.M. _______________

5. We use A.M. after __________ and before ___________.

LEVEL E

TIME

Skill 1, 2 (Page 2 of 2 pages)

Name ______________________

Date ______________________

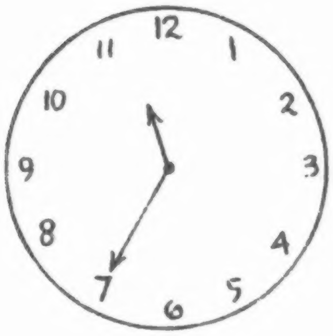
Solve these problems.

6. The tardy bell rings at 7:50 and class begins at 8:00. How many minutes have gone by?

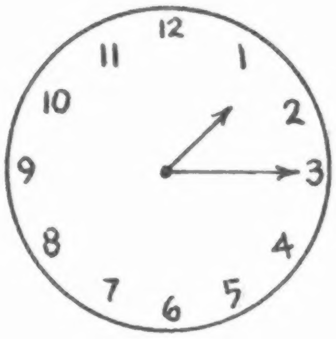
____

7. How many minutes have passed between the time shown on clock A and clock B?

A.



B.



8. The first class begins at 8:10 and ends at 8:50. How many minutes does the class last?

____

9. Jack won the race. The race began at 2:30. His time was one minute. What time did he cross the finish line?

____

10. Ann began reading at 10:45 A.M. She read until 11:30 A.M. How many minutes did she read?

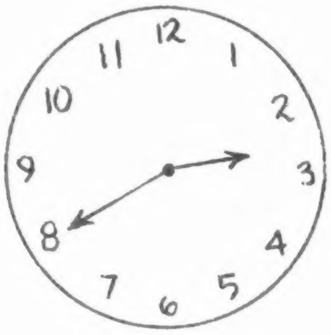
____

LEVEL E Name ______________________

TIME Date ______________________

Skill 3 (Page 1 of 4 pages)

Use the pictured clock to answer questions 1, 2, and 3.



1. a. 1 hour and 30 minutes later than the time shown ____________

   b. 2 hours and 30 minutes earlier than the time shown __________

   c. 3 hours and 30 minutes later than the time shown ___________

2. What time will it be $2\frac{1}{2}$ hours from the time shown on this clock?

2.______________

3. What was the time $1\frac{1}{2}$ hours earlier than the time shown on this clock face?

3.______________

4. Bob left home at 8:30 A.M. He returned in 1 hour and 30 minutes. What time was it when he got home?

4.______________

5. Lunch period begins at 11:30. Each section of the fourth year class will go to lunch at 3 minute intervals. What time will it be when the 6th section goes to lunch?

5.______________

LEVEL E

TIME

Skill 3 (Page 2 of 4 pages)

Name ____________________

Date ____________________

6. Plane

	Leaves	Arrives	Leaves	Arrives
	Cleveland	Jacksonville	Jacksonville	Nashville
A.	9:00 A.M.	11:30 A.M.	12:30 A.M.	2:30 P.M.
B.	11:10 A.M.	1:20 P.M.	2:00 P.M.	5:05 P.M.

1. Plane A. arrives in Jacksonville at: ____________________
2. Plane B. leaves Jacksonville at: ____________________
3. Plane B. arrives in Nashville at: ____________________
4. Plane A. leaves Cleveland at : ____________________

7. Plane

	Leaves	Arrives	Leaves	Arrives
	Chicago	St. Louis	St. Louis	Dallas
#69	9:05 A.M.	9:55 A.M.	10:15 A.M.	11:35 A.M.
#16	1:15 P.M.	1:57 P.M.	2:18 P.M.	3:03 P.M.

1. Plane #69 arrives in St. Louis, in the morning, at: __________
2. Plane #16 leaves St. Louis, in the afternoon, at: __________
3. How many minutes does #69 plane stay in St. Louis? __________

LEVEL E

TIME

Skill 3 (Page 4 of 4 pages)

Name ______________________

Date ______________________

10. Plane

	Leaves	Arrives	Leaves	Arrives
	St. Louis	Chicago	Chicago	Cleveland
#69	9:00 A.M.	9:57 A.M.	10:18 A.M.	11:00 A.M.
#143	1:12 P.M.	2:02 P.M.	2:31 P.M.	3:14 P.M.

1. If you fly from Chicago to Cleveland, leaving before noon, what time will you leave?

____

LEVEL E

TIME

Name ____________________

Date ____________________

Skill 3 (Page 3 of 4 pages)

Bus

8.

	Leaves	Arrives	Leaves	Arrives
	Melbourne	Daytona	Daytona	Jacksonville
A.	3:30 A.M.	5:00 A.M.	5:15 A.M.	7:15 A.M.
B.	5:15 P.M.	6:45 P.M.	7:00 P.M.	8:45 P.M.

1. Bus A. arrives in Jacksonville at: ____________________
2. Bus B. leaves Daytona at: ____________________
3. Which bus arrives in Jacksonville for breakfast? __________

Plane

9.

	Leaves	Arrives	Leaves	Arrives
	Melbourne	Tampa	Tampa	Houston
A.	1:45 A.M.	2:45 A.M.	3:15 A.M.	5:30 A.M.
B.	8:15 P.M.	9:15 P.M.	9:45 P.M.	11:55 P.M.

1. Plane A. arrives in Tampa at: ____________________
2. Plane B. arrives in Houston at: ____________________
3. Plane A. leaves Tampa at: ____________________

LEVEL E　　　　Name ______________________

TIME　　　　Date ______________________

Skill 4

(Teacher Note: See problem 5.)

1. In fifteen seconds it will be exactly 9:00. The second hand is now on:
    - (a) 3
    - (b) 6
    - (c) 9
    - (d) 4

2. If a clock runs for 2 minutes and 30 seconds, the second hand goes around:
    - (a) 1½ times
    - (b) 2½ times
    - (c) 3½ times
    - (d) 1 time

3. Jane said, " I will be there in half a minute."
How many seconds would this be?

3. ______________________

4. How many seconds in a minute?　　4. ______________________

How many minutes in an hour?　　______________________

5. Using a clock, have students identify time:

_____ hour, _____ minute, _____ second

LEVEL E

TIME

Skill 5

Name ____________________

Date ____________________

1. Complete this calendar for December 1970.

<table>
<tr><td>1970</td><td colspan="5">DECEMBER</td><td>1970</td></tr>
<tr><td>SUN.</td><td>MON.</td><td>TUES.</td><td>WED.</td><td>THUR.</td><td>FRI.</td><td>SAT.</td></tr>
<tr><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td>9</td><td></td><td></td><td>12</td></tr>
<tr><td></td><td></td><td></td><td></td><td>17</td><td></td><td></td></tr>
<tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>29</td><td></td><td>31</td><td></td><td></td></tr>
</table>

2. From the calendar:

   What date is the 2nd Friday in December? ____________________

3. Write December twenty-first, nineteen seventy, using numerals.

   ____

4. How many days are in the month of December? ____________________

5. Paul knows that if November 5 is on a Saturday he can find what day November 15 is by:

   ____

   What day is it? ____________________________________

LEVEL E

TIME

Skill 6

Name ______________________

Date ______________________

1. Joan washed her hair on Saturday. It took 15 minutes to shampoo, ½ hour to put it on curlers, 40 minutes to dry, and 30 minutes to comb. She spent ________ hours, ________ minutes doing her hair.

2. It took Jack 9 weeks to learn his multiplication facts. It took Jill 17 days to learn hers. How many days longer did it take Jack to learn his?

____

3. 30 days in a month and 12 months in a year.

6 yrs.	4 mos.	20 days
- 3 yrs.	5 mos.	22 days
yrs.	mos.	days

4. 30 days in a month and 12 months in a year.

3 mos.	17 days
+ 9 mos.	20 days
mos.	days

5. 60 seconds in a minute and 60 minutes in an hour.

7 hours	40 mins.	22 secs.
+	30 mins.	44 secs.
hours	mins.	secs.

LEVEL E
MONEY
Skill 1 (Page 1 of 2 pages)

Name ____________________

Date ____________________

1. Circle the names of the coins which you would receive as change if you bought a ship model for $4.15 and gave the clerk $5.00.

half-dollar quarter dime nickel penny

2. Circle the names of the **money** which you would receive as change if you bought a book for $3.29 and gave the clerk $5.00.

half-dollar quarter 2 dimes nickel

penny one dollar

3. Circle the names of the coins which you would receive as change if you bought a lunch box for $2.64 and gave the sales clerk $3.00.

half-dollar quarter dime nickel penny

4. What are the greatest number of the following coins which you could receive if you bought a pair of slacks for $7.99 and gave the sales clerk $10.00?

___ half-dollars ____ pennies ____ quarters

5. Circle the names of the **money** which you would receive as change if you bought groceries totaling $8.75, and gave the clerk $10.00.

half-dollar quarter dime nickel

penny one dollar

LEVEL E

MONEY

Skill 1 (Page 2 of 2 pages)

Name ______________________________

Date ______________________________

6. Circle the names of the coins which you would receive as change if you bought a baseball glove for $6.89 and gave the clerk $7.00.

dime nickel quarter penny

7. Circle the names of the coins which you would receive as change if you bought a model car for $1.49 and gave the clerk $2.00.

penny dime half-dollar nickel

8. Circle the name of the coins which you would receive as change if you bought a pair of shoes for $6.59 and you gave the clerk $6.75.

nickel penny dime quarter

9. Circle the name of the coins which you would receive as change if you bought a toy for 74¢ and gave the clerk $1.00.

penny nickel quarter dime

10. Circle the names of the money which you would receive as change if you bought a football for $3.64 and gave the clerk $5.00.

dime penny half-dollar

quarter one dollar

LEVEL E

MONEY

Skill 2

Name ____________________

Date ____________________

Solve.

1. $$\begin{array}{r} 32¢ \\ +\ 48¢ \\ \hline \end{array}$$

2. $$\begin{array}{r} \$5.70 \\ -\ 5.45 \\ \hline \end{array}$$

3. $$\begin{array}{r} \$.96 \\ -\ .09 \\ \hline \end{array}$$

4. $7.50 + $.35 =

5. $$\begin{array}{r} \$\ 1.87 \\ .17 \\ +26.08 \\ \hline \end{array}$$

6. $$\begin{array}{r} \$9.06 \\ +2.48 \\ \hline \end{array}$$

7. $$\begin{array}{r} \$21.94 \\ 1.09 \\ 7.17 \\ .25 \\ \hline \end{array}$$

8. $$\begin{array}{r} \$1.45 \\ 2.35 \\ .39 \\ .19 \\ .22 \\ .17 \\ \hline \end{array}$$

9. $25.38 - $14.56 =

10. $3.97 - $1.26 =

LEVEL E

MONEY

Skill 4 (Page 1 of 2 pages)

Name ________________________

Date ________________________

Solve. Label.

1. Carol bought a book for 59¢, a stuffed toy animal for $1.98, and a whistle for 39¢. How much change would Carol receive if she gave the clerk $10?

1. ____________________

2. Scott bought a paint set for $1.25, a toy truck for 89¢, and a gift for his mother for $1.75. How much change would Scott receive if he gave the clerk $5?

2. ____________________

3. Lynn bought a blouse for $3.98 and a skirt for $5.25. What change would Lynn receive if she gave the clerk $10?

3. ____________________

4. Don bought a hot dog for 30¢, some French fries for 25¢, a large coke for 25¢ and two nickel candy bars. How much change would Don receive if he gave the clerk $5?

4. ____________________

5. Chris bought a stamp collection for $2.75, a book to put them in for 89¢ and a guide for collecting other stamps for $1.25. How much change would Chris receive if he gave the clerk $5?

5. ____________________

LEVEL E

MONEY

Skill 4 (Page 2 of 2 pages)

Name ____________________

Date ____________________

6. Tom bought a ball glove for $4.95 and a baseball for $3.00. How much change would he receive if he gave the clerk $10?

6. ____________

7. Willy bought a hot dog for 30¢, a drink for 15¢, a bar of candy for 10¢ and a bag of potato chips for 25¢. How much change would he receive if he gives the salesman $1?

7. ____________

8. Susie saved her allowance for five weeks. She gets $2.00 a week allowance. If she buys a dress for $6.98, how much money will she have left?

8. ____________

9. Billy mowed 8 lawns at $1.25 each. He bought a badminton set for $6.95. What amount does he have left?

9. ____________

10. The 4 boys in the club each paid $2.00 dues. They bought a football game for $5.49 with the money. What amount do they have left?

10. ____________

LEVEL E

NUMERATION

Skill 1, 2 (Page 1 of 2 pages)

Name ______________________

Date ______________________

Fill in the blanks in this sequence.

1. 624,327; 624,328; 624,329; 624,330; 624,331; 624,332; 624,333

2. 999,994; 999,995; 999,996; 999,997; 999,998; 999,999; 1,000,000

3. 253,839; 253,840; 253,841; 253,842; 253,843; 253,844; 253,845

4. 253,108; 253,109; 253,110; 253,111; 253,112; 253,113; 253,114

5. 207,898; 207,899; 207,900; 207,901; 207,902; 207,903; 207,904

Write the number words or the number for the following:

1. Seventy-five 1. 75

2. 628 2. six hundred twenty-eight

3. 950 3. nine hundred fifty

4. Eight thousand, three hundred, twenty-five 4. 8,325

5. 3002 5. three thousand, two

LEVEL E Name

NUMERATION Date

Skill 1, 2 (Page 2 of 2 pages)

Give the place value of the underlined digit.

1. 695,643 1. thousand
2. 926,408 2. ten thousand
3. 567,904 3. hundred thousand
4. 796,713 4. ten thousand
5. 1,520,427 5. million

Write these numbers in expanded notation.

1. 8,260 = 8,000 + 200 + 60 + 0

2. 182,952 = 100,000 + 80,000 + 2,000 + 900 + 50 + 2

Write the following using number words.

3. 503,762 five hundred three thousand, seven hundred sixty-two

4. 1,025,700 one million, twenty-five thousand, seven hundred

Complete the place value chart.

	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
476,393	4	7	6	3	9	3
109,006	1	0	9	0	0	6

LEVEL E

NUMERATION

Skill 3

Name ________________________

Date ________________________

Use > or < in the ○.

1. 6,280 (>) 4,280
2. 836,420 (>) 83,432
3. 809,604 (<) 809,640
4. 44,952 (>) 43,952
5. 389,420 (>) 389,412
6. 763,982 (>) 736,982
7. 286,589 (<) 286,598
8. 572,361 (<) 572,631
9. 998,723 (>) 989,723
10. 289,767 (>) 273,767

LEVEL F

NUMERATION

Skill 4

Name ______________________

Date ______________________

Write the Roman numeral or Arabic base 10 numeral for the following:

1. 9 IX

2. 44 XLIV

3. 12 XII

4. 18 XVIII

5. XIX 19

6. MCMLXX 1970

7. 500 D

8. L 50

9. 20 XX

10. 1000 M

LEVEL E — Name ____________________

NUMERATION — Date ____________________

In-Depth (Odd and Even Numbers)

If the operations below are done, will the answers be odd or even?

	ODD	EVEN
1. Even + Even =	____	even
2. Even x odd =	____	even
3. Even - odd =	odd	____

4. Select the letter of the rule that applies to the example

11 - 2 = 9.

(a) odd - odd = odd
(b) odd - odd = even
(c) odd - even = odd
(d) odd - even = even

4. C

5. Give an example for the rule "an odd number minus an odd number equals an even number."

5. answers will vary

LEVEL E

Name ______________________

ADDITION AND SUBTRACTION

Date ______________________

Skill 1

Fill in the missing addend.

1. 445 + 45 = 45 + 445

2. 250 + 50 = 50 + 250

3. 230 + 21 = 21 + 230

Select the equations which show the commutative principle.

4. a. [✓ 39 + 253 = 253 + 39]
   b. 39 + 200 + 50 + 3 = 292
   c. 39 + 253 = 39 + 253

5. a. 300 + 72 + 37 = 372 + 37
   b. 372 + 37 = 409
   c. [✓ 372 + 37 = 37 + 372]

6. a. 90 + 54 = 90 + 50 + 4
   b. 90 + 54 = 144
   c. [✓ 90 + 54 = 54 + 90]

Complete the equations.

7. 8 + 7 = 8 + (2+5)
   = (8+2) + 5
   = 10 + 5
   = 15

8. 9 + 9 = 9 + (1+8)
   = (9+1) + 8
   = 10 + 8
   = 18

9. (6+3) - 3 = 6 + (3-3) = 6

10. 5 + 7 - 7 = 5 + (7 - 7) = 5

LEVEL E

ADDITION AND SUBTRACTION

Skill 2

Name ______________________

Date ______________________

Write each sentence as a number sentence.

1. 5 is greater than 4.

   $5 > 4$

2. 863 is less than 922.

   $863 < 922$

3. 500 + 40 + 6 and 546 name the same number.

   $500 + 40 + 6 = 546$

4. The sum of 8 and 6 is greater than the sum of 9 + 4.

   $8 + 6 > 9 + 4$

Write >, < , or = in the ○.

5. $8 + 2 = 3 + 7$

6. $6 + 6 < 9 + 4$

7. $18 - 7 < 6 + 9$

8. $4 + 6 > 6 - 4$

9. $0 + 5 = 5 + 0$

10. $8 - 3 > 3 + 1$

LEVEL E	Name ______________________

ADDITION AND SUBTRACTION	Date ______________________

Skill 3

Use the rule to complete each set of number pairs.

1. The second number is 5 greater than the first.

(1, 6), (2, 7), (3, 8), (4, 9), (5, 10), (6, 11)

2. The second number is 8 less than the first.

(8, 0), (9, 1), (10, 2), (11, 3), (12, 4), (13, 5)

3. The second number is 9 greater than the first.

(1, 10), (2, 11), (3, 12), (4, 13), (5, 14), (6, 15)

4. The second number is 5 less than the first.

(2, 7), (3, 8), (4, 9), (5, 10), (6, 11), (7, 12)

5. The second number is 6 less than the first.

(18, 12), (17, 11), (16, 10), (15, 9), (14, 8), (13, 7)

Complete the number pairs in each set.

6. (6, 3), (8, 5), (7, 4), (9, 6), (3, 0), (5, 2), (10, 7), (11, 8)

7. (3, 3), (4, 4), (5, 5), (6, 6), (7, 7), (8, 8), (9, 9), (10, 10)

8. (5, 11), (6, 12), (7, 13), (8, 14), (9, 15), (4, 10), (3, 9), (2, 8)

9. (3, 12), (5, 14), (2, 11), (5, 14), (4, 13), (8, 17), (6, 15), (0, 9)

10. (7, 3), (8, 4), (9, 5), (10, 6), (11, 7), (12, 8), (13, 9), (6, 2)

LEVEL E

ADDITION AND SUBTRACTION

Skill 4

Name ____________________

Date ____________________

Add.

```
 14,965
+26,638
 41,603
```

```
 94,382
 +6,439
100,821
```

```
 17,065
+19,374
 36,439
```

```
 87,682
+19,507
107,189
```

```
 3,954
 4,163
+5,002
13,119
```

```
 9,246
 3,052
+  941
13,239
```

Subtract.

```
43,521
-4,789
38,732
```

```
35,678
-9,780
25,898
```

```
 5,500
-1,679
 3,821
```

```
60,001
-6,789
53,212
```

LEVEL E

ADDITION AND SUBTRACTION

Skill 5 (Page 1 of 2 pages)

Name ______________________

Date ______________________

Solve the problems. **Label.**

1. The fifth and sixth grades sold 589 pencils; the third and fourth grades sold 600 pencils and the first and second grades sold 450 pencils. How many pencils did all the children sell together?

1. 1639 pencils

2. Mary's room was collecting bottle caps for the math class. They collected 360 on Monday, 398 on Tuesday, and 1,000 on Wednesday. How many bottle caps did they collect on Tuesday and Wednesday?

2. 1398 bottle caps

3. John was saving popsicle sticks. He collected 200 the first week, 370 the next week, and 210 the next. How many sticks did he have then?

3. 780 sticks

4. Mary sold 66 cookies on Thursday, 182 on Friday and 378 on Saturday. Susan sold a total of 750 cookies. How many cookies did the 2 girls sell?

4. 1376 cookies

5. Jim saved $16.35 in one year, $23.52 the next and $126.78 the third year. How much money does he have now?

5. $166.65

LEVEL E

ADDITION AND SUBTRACTION

Skill 5 (Page 2 of 2 pages)

Name ______________________

Date ______________________

Solve the problems.

6. There were 812 birds in the park. There were 201 redbirds, 199 bluebirds, 87 pigeons and 4 parrots and the rest were robins. How many robins were in the park?

6. 320 robins

7. There were 962 pupils in school. 507 were boys. How many girls were there?

7. 455 girls

8. If your heart beats 70 times a minute when you are sitting down and 120 times a minute when you are walking, how much faster does it beat when you walk?

8. 50 times a min

9. Mr. Brown's music class collected 543 old records. 296 of these records were jazz records and 165 were folk songs, the rest were patriotic. How many patriotic records?

9. 132 patriotic records

10. There were 900 people at the tulip festival. 317 were men, 450 were women, how many children were there at the tulip festival?

10. 133 children

LEVEL E

Name ______________________________

MULTIPLICATION AND DIVISION

Date ______________________________

Skill 1

Name the missing numerals.

1. 9 + 9 + 9 + 9 + 9 + 9 = 54
6 x 9 = 54

6. 5 + 5 + 5 + 5 + 5 = 25
5 x 5 = 25

2. 10 + 10 + 10 + 10 + 10 + 10 = 60
6 x 10 = 60

7. 64 + 64 + 64 = 192
3 x 64 = 192

3. 81 + 81 + 81 + 81 + 81 + 81 = 486
6 x 81 = 486

8. 54 + 54 + 54 + 54 = 216
4 x 54 = 216

4. 79 + 79 + 79 + 79 + 79 = 395
5 x 79 = 395

9. 29 + 29 + 29 = 87
3 x 29 = 87

5. 93 + 93 + 93 + 93 = 372
4 x 93 = 372

10. 46 + 46 + 46 + 46 = 184
4 x 46 = 184

LEVEL E Name ______________________________

MULTIPLICATION AND DIVISION Date ______________________________

Skill 2 (Page 1 of 2 pages)

Timed: 4 minutes

Name the products.

8	2	1	0	1	7	8	1	7
2	6	8	6	9	2	1	9	9
16	12	8	0	9	14	8	9	63

2	6	9	9	2	7	1	0	6
7	1	1	7	8	1	6	7	9
14	6	9	63	16	7	6	0	54

1	6	0	9	0	6	2	7	5
7	5	8	2	9	2	9	3	7
7	30	0	18	0	12	18	21	35

6	9	3	6	5	7	3	6	3
3	9	7	4	9	7	8	6	9
18	81	21	24	45	49	24	36	27

7	4	5	9	9	5	4	8	8
5	6	8	5	3	6	7	5	8
35	24	40	45	27	30	28	40	64

4	7	8	8	7	6	9	8	7
9	4	6	3	6	7	4	9	8
36	28	48	24	42	42	36	72	56

9	8	6	9	8	6	9	7	4
8	4	8	6	7	0	3	0	8
72	32	48	54	56	0	27	0	32

LEVEL E

MULTIPLICATION AND DIVISION

Skill 2 (Page 2 of 2 pages)

Timed: 3 minutes

Name ______________________

Date ______________________

Name the quotients.

9 7)63	7 8)56	8 8)64	3 9)27	5 7)35	6 9)54
2 8)16	7 2)14	6 3)18	7 5)35	9 4)36	7 4)28
4 6)24	9 9)81	5 6)30	6 1)6	6 2)12	8)72
7 3)21	5 8)40	8 6)48	8 3)24	9 5)45	4 6)42
9 2)18	7 9)63	8 7)56	9 3)27	9 6)54	7 7)49
6 6)36	8 5)40	8 9)72	4 9)36	4 7)28	4 8)32
9 4)36	3 7)21	7 8)56	0 7)0	6 5)30	9 1)9
5 7)35	8 4)32	3 6)18	2 7)14	2 9)18	6 7)42

LEVEL E

MULTIPLICATION AND DIVISION

Skill 3

Name ______________________

Date ______________________

Draw a circle around the equation which shows the commutative principle.

1. ⓐ 3 x 8 = 24
   ⓑ 3 x 8 = 4 x (3x2)
   ⓒ [✓ 3 x 8 = 8 x 3]

2. ⓐ 3 x 30 = 3 x (3x10)
   ⓑ [✓ 6 x 9 = 9 x 6]
   ⓒ 9 x 6 = 54

Supply the missing factors.

3. 8 x 3 = 3 x 8

4. 9 x 7 = 7 x 9

Complete the equations.

5. (7 x 4) + (7 x 3)
   = 28 + 21
   = 49

6. (6 x 3) + (4 x 3)
   = (6 + 4) x 3
   = 10 x 3
   = 30

7. 3 x (3 x 6) = (3 x 3) x 6
   = 9 x 6
   = 54

8. (3 x 20) x 4 = 3 x (20 x 4)
   = 3 x 80
   = 240

9. 42 x 3 = (40 + 2) x 3
   = (40 x 3) + (2 x 3)
   = 120 + 6
   = 126

10. 5 x 70 = 5 x (7 x 10)
   = (5 x 7) x 10
   = 35 x 10
   = 350

LEVEL E Name

MULTIPLICATION AND DIVISION Date

Skill 4

Name the multiplication rule. Then complete the number pair in each set.

1. {(6, 36), (3, 18), (7, 42), (9, 54), (4, 24)}
   Rule: multiply by 6

2. {(63, 7), (27, 3), 54, 6), (72, 8), (45, 5)}
   Rule: Divide by 9

3. {(21, 3), (35, 5), (49, 7), (28, 4), (63, 9)}
   Rule: Divide by 7

4. {(3,24), (7,56), (4,32), (9,72), (6,48)}
   Rule: multiply by 8

5. {(1,5), (3,15), (9,45), (7,35), (6,30)}
   Rule: multiply by 5

6. {(7,70), (9,90), (36,360), (20,200), (78,780)}
   Rule: multiply by 10

7. {(20,5), (4,1), (24, 6), (40,10), (36, 9)}
   Rule: Divide by 4

8. {(24,4), (36,6), (54, 9), (42, 7), (48, 8)}
   Rule: Divide by 6

9. {(4,28), (3,21), (6,42), (8,56), (5,35)}
   Rule: multiply by 7

10. {(90,9), (50,5), (120,12), (270,27), (390,39)}
    Rule: Divide by 10

LEVEL E Name ____________________

MULTIPLICATION AND DIVISION Date ____________________

Skill 5

Name the products.

27	29	38	85	94
5	4	3	4	3
135	116	114	340	282
19	68	37	29	76
4	6	7	9	4
76	408	259	261	304
549	328	864	983	7546
2	3	8	7	9
1098	984	6,912	6,881	67,914
783	958	569	7193	64308
5	7	7	8	5
3,915	6,706	3,983	57,544	321,540

LEVEL E

MULTIPLICATION AND DIVISION

Skill 6

Name ____________________

Date ____________________

Find the products.

3 x 7 = 21	4 x 8 = 32
3 x 70 = 210	4 x 80 = 320
3 x 700 = 2100	4 x 800 = 3200
3 x 7000 = 21,000	4 x 8000 = 32,000

Name the products.

48	56	67	36
10	1000	90	50
480	5,600	6,030	1,800

83	59	82	87
20	100	60	10,000
1,660	15,900	4,920	870,000

LEVEL E

MULTIPLICATION AND DIVISION

Skill 7

Name ____________________

Date ____________________

Name the products.

94	88	46	62	73
35	88	24	17	29
70	704	184	434	657
2	704	92	62	146
90	7,744	1,104	1,054	2,117

39	68	47	57	99
26	39	81	57	58
234	612	47	399	792
78	204	376	285	495
1,014	2,652	3,807	3,249	5,742

LEVEL E

Name ______________________________

MULTIPLICATION AND DIVISION

Date ______________________________

Skill 8, 9

Use the "ladder" method to find the quotients.
check by multiplying. *

$$\begin{array}{r|l} \multicolumn{1}{r}{11} & \\ 4\overline{)44} & \\ 40 & 10 \\ \hline 4 & \\ 4 & 1 \\ \hline 0 & 11 \end{array} \qquad \begin{array}{r} 11 \\ 4 \\ \hline 44 \end{array} \qquad\qquad \begin{array}{r|l} \multicolumn{1}{r}{12} & \\ 6\overline{)72} & \\ 60 & 10 \\ \hline 12 & \\ 12 & 2 \\ \hline 0 & 12 \end{array} \qquad \begin{array}{r} 12 \\ 6 \\ \hline 72 \end{array} \qquad\qquad \begin{array}{r|l} \multicolumn{1}{r}{11} & \\ 9\overline{)99} & \\ 90 & 10 \\ \hline 9 & \\ 9 & 1 \\ \hline 0 & 11 \end{array} \qquad \begin{array}{r} 11 \\ 9 \\ \hline 99 \end{array}$$

$$\begin{array}{r|l} \multicolumn{1}{r}{13} & \\ 7\overline{)91} & \\ 70 & 10 \\ \hline 21 & \\ 21 & 3 \\ \hline 0 & 13 \end{array} \qquad \begin{array}{r} 13 \\ 7 \\ \hline 91 \end{array} \qquad\qquad \begin{array}{r|l} \multicolumn{1}{r}{18} & \\ 5\overline{)90} & \\ 50 & 10 \\ \hline 40 & \\ 40 & 8 \\ \hline 0 & 18 \end{array} \qquad \begin{array}{r} 18 \\ 5 \\ \hline 90 \end{array} \qquad\qquad \begin{array}{r|l} \multicolumn{1}{r}{13} & \\ 3\overline{)39} & \\ 30 & 10 \\ \hline 9 & \\ 9 & 3 \\ \hline 0 & 13 \end{array} \qquad \begin{array}{r} 13 \\ 3 \\ \hline 39 \end{array}$$

$$\begin{array}{r|l} \multicolumn{1}{r}{19} & \\ 9\overline{)171} & \\ 90 & 10 \\ \hline 81 & \\ 81 & 9 \\ \hline 0 & 19 \end{array} \qquad \begin{array}{r} 19 \\ 9 \\ \hline 171 \end{array} \qquad\qquad \begin{array}{r|l} \multicolumn{1}{r}{28} & \\ 4\overline{)112} & \\ 80 & 20 \\ \hline 32 & \\ 32 & 8 \\ \hline 0 & 28 \end{array} \qquad \begin{array}{r} 28 \\ 4 \\ \hline 112 \end{array}$$

$$\begin{array}{r|l} \multicolumn{1}{r}{23} & \\ 8\overline{)184} & \\ 160 & 20 \\ \hline 24 & \\ 24 & 3 \\ \hline 0 & 23 \end{array} \qquad \begin{array}{r} 23 \\ 8 \\ \hline 184 \end{array} \qquad\qquad \begin{array}{r|l} \multicolumn{1}{r}{29} & \\ 9\overline{)261} & \\ 180 & 20 \\ \hline 81 & \\ 81 & 9 \\ \hline 0 & 29 \end{array} \qquad \begin{array}{r} 29 \\ 9 \\ \hline 261 \end{array}$$

*Checking done by method illustrated in HM Book 4, p. 184 is also acceptable.

LEVEL E

MULTIPLICATION AND DIVISION

Skill 10

Name ______________________

Date ______________________

Label the parts.

a) quotient

b) divisor

c) dividend

d) remainder

a)→5
b)→4) 23 ←c)
20
3←d)

Name the quotients and remainders.

8 R 4
6)52
48
4

24 R.1
2)49
40
9
8
1

8 R 1
8)65
64
1

9 R 4
7)67
63
4

9 R 3
9)84
81
3

7 R 5
8)61
56
5

7 R 3
6)45
42
3

10 R 4
9)94
90
4

4 R 3
7)31
28
3

9 R 5
7)68
63
5

LEVEL E

MULTIPLICATION AND DIVISION

Skill 11 (Page 1 of 2 pages)

Name ______________________

Date ______________________

Solve the problems. **Label.**

1. If there are 35 marbles in each bag, how many marbles would you have if you were given 56 bags of marbles?

1. 2,060 marbles

2. If there are 4 quarts in each gallon, how many gallons are there in 2,344 quarts?

2. 586 gallons

3. Sara had 42 cents when she went shopping. She needed pencils. If she paid 6 cents for each pencil, how many pencils could she buy?

3. 7 pencils

4. There are 30 days in November and 24 hours in each day. How many hours are there in November?

4. 720 hours

5. The coach asked 56 boys to line up in rows of 7. How many rows did they have?

5. 8 rows

LEVEL E

MULTIPLICATION AND DIVISION

Skill 11 (Page 2 of 2 pages)

Name ______________________

Date ______________________

6. Mary brought 35 suckers to the party.

   a. How many suckers will each child get if there are 16 children at the party?

   a. 2 suckers

   b. How many suckers will be left?

   b. 3 suckers

7. If 11 people could ride in one bus, how many could ride in 12 buses?

7. 132 people

8. If there are 5 boxes each containing 6 balls and 7 boxes each containing 7 balls, how many balls are there in all?

8. 84 balls

9. At the carnival Sally spent 85¢ for 5 rides on the ferris wheel. How much did one ride cost if all rides cost the same?

9. 17¢

10. There are 480 windows to be washed and 6 men to wash them. How many windows will each man have to clean?

10. 80 windows

LEVEL E

FRACTIONS

Skill 1, 3

Name ______________ ______________

Date ______________

1. In the fraction $\frac{3}{5}$

3 is the numerator

5 is the denominator

2. In the fraction $\frac{8}{10}$

10 is the denominator

8 is the numerator

3. In the fraction $\frac{7}{9}$

7 is the numerator

9 is the denominator

4. In the fraction $\frac{9}{10}$

9 is the numerator

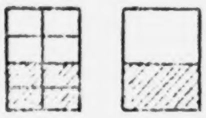
10 is the denominator

5. In the fraction $\frac{16}{24}$

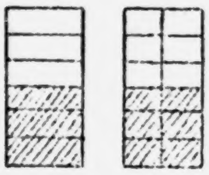
24 is the denominator

16 is the numerator

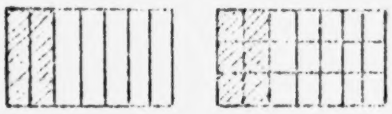
Complete each equation.



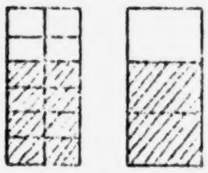
1. $\frac{4}{8} = \frac{\boxed{1}}{2}$



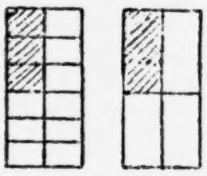
2. $\frac{3}{6} = \frac{\boxed{6}}{12}$



3. $\frac{2}{7} = \frac{6}{\boxed{21}}$



4. $\frac{8}{12} = \frac{\boxed{2}}{3}$



5. $\frac{3}{12} = \frac{1}{\boxed{4}}$

LEVEL E

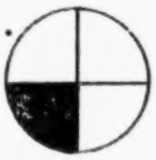
FRACTIONS

Skill 2

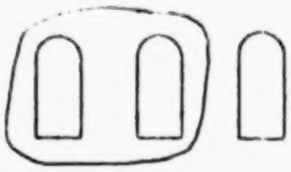
Name ______________________

Date ______________________

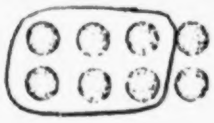
1. Shade $\frac{1}{4}$ of the circle.



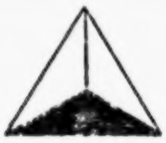
2. Draw a ring around $\frac{2}{3}$ of the set.



3. Circle $\frac{3}{4}$ of the balls.

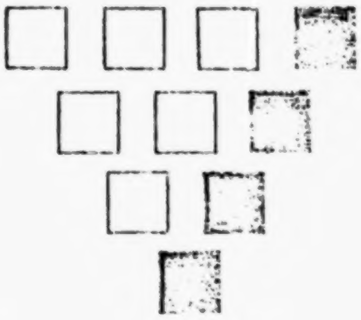


4. Write a fraction to tell the part of the region that is shaded.



4. $\frac{1}{3}$

5. Write a fraction to tell what part of this set is shaded.



5. $\frac{4}{10}$

Complete each equation.

1. $\frac{1}{3}$ of 15 = 5

2. $\frac{3}{4}$ of 36 = 27

3. $\frac{1}{4}$ of 24 = 6

4. $\frac{3}{5}$ of 65 = 39

5. 27 = $\frac{3}{9}$ of 81

LEVEL E

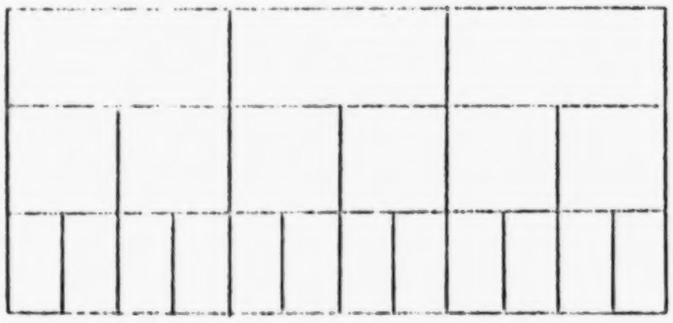
FRACTIONS

Name ______________________

Date ______________________

Skill 4, 5

Use the number rods to complete the number sentences. Write $>$, $<$ or = in the $\bigcirc$.



1. $\frac{2}{6} \textcircled{<} \frac{2}{3}$
2. $\frac{8}{12} \textcircled{>} \frac{3}{6}$
3. $\frac{3}{6} \textcircled{>} \frac{3}{12}$
4. $\frac{2}{12} \textcircled{<} \frac{2}{6}$
5. $\frac{1}{3} \textcircled{=} \frac{2}{6}$

Solve the equations.

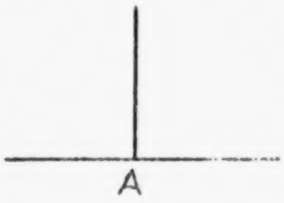
1. $\frac{3}{9} + \frac{3}{9} = \frac{6}{9}$
2. $\frac{2}{10} + \frac{3}{10} = \frac{5}{10}$
3. $\frac{5}{6} - \frac{3}{6} = \frac{2}{6}$
4. $\frac{3}{6} + \frac{1}{6} + \frac{1}{6} = \frac{5}{6}$
5. $\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$

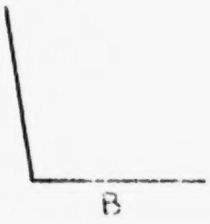
LEVEL E Name

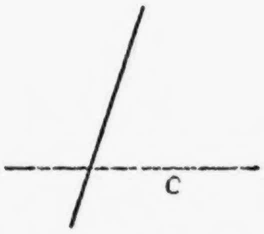
GEOMETRY Date

Skill 1 (Page 1 of 2 pages)

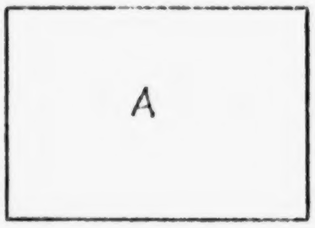
1. Which figure shows lines that are perpendicular? 1. A

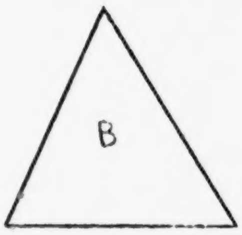


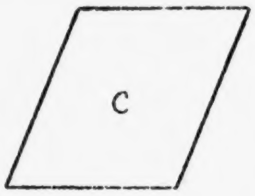




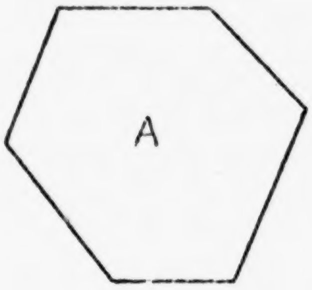
2. Which figure shows lines that are perpendicular? 2. A

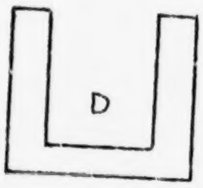


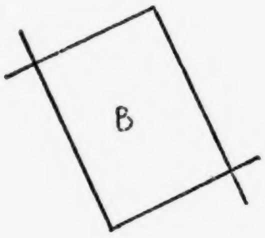


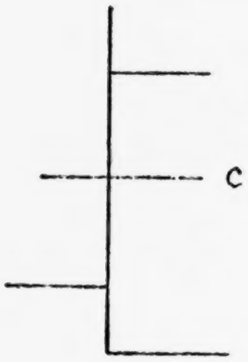


3. Which figure is not constructed of perpendicular lines? 3. A

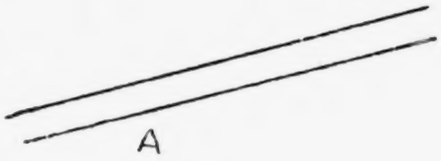


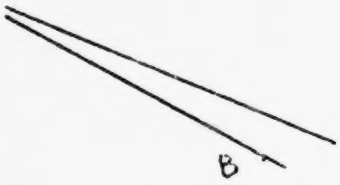




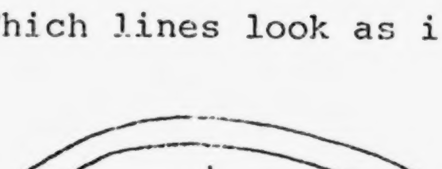


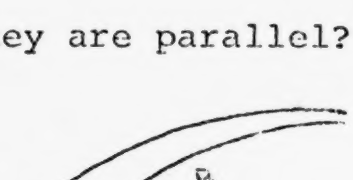
4. Which lines look as if they are parallel? 4. A





5. Which lines look as if they are parallel? 5. A



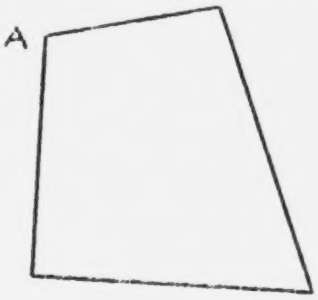


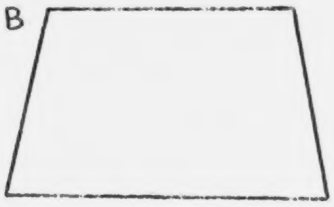
LEVEL E Name ______________________

GEOMETRY Date ______________________

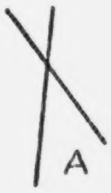
Skill 1 (Page 2 of 2 pages)

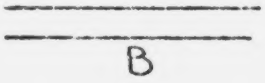
6. Which figure looks as if it had parallel lines? 6. B





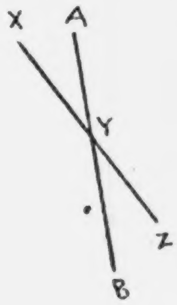
7. Which of the following figures show intersecting lines?





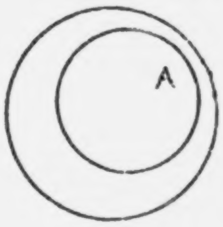
7. A

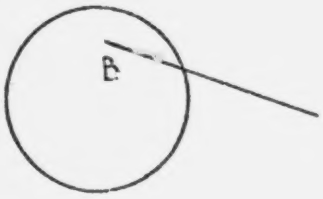
8. What is the name of the intersection of these two lines?



8. Y

9. Which of the following figures show intersecting lines?

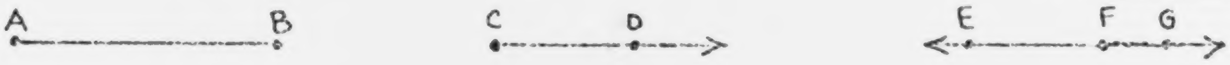




9. B

10. Which of the following are congruent line segments?

10. $\overline{CD}$ and $\overline{EF}$



LEVEL E

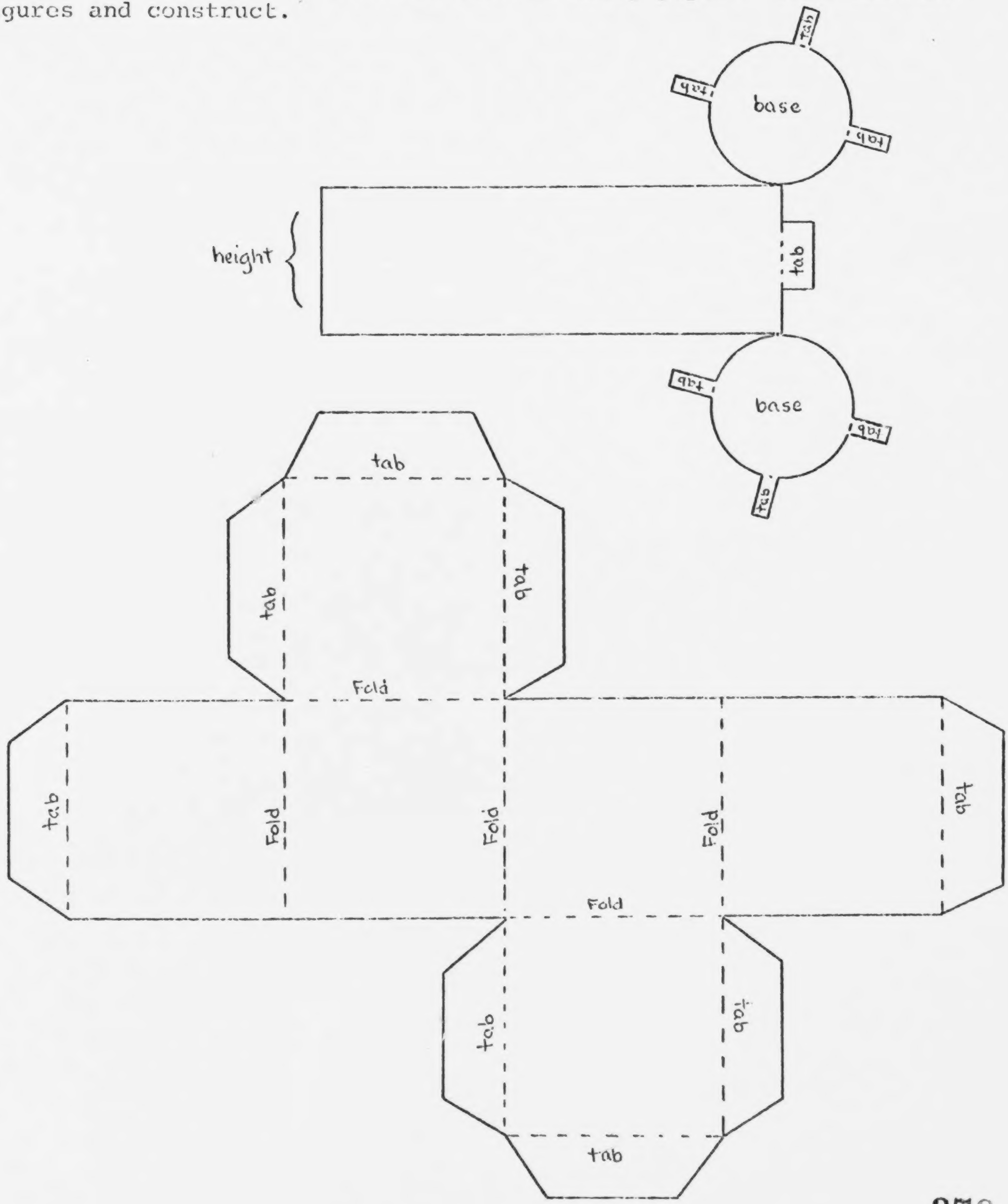
GEOMETRY

Skill 3

Name ______________________

Date ______________________

Cut out the figures and transfer them to heavy paper. Then cut out figures and construct.


tab
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base
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height
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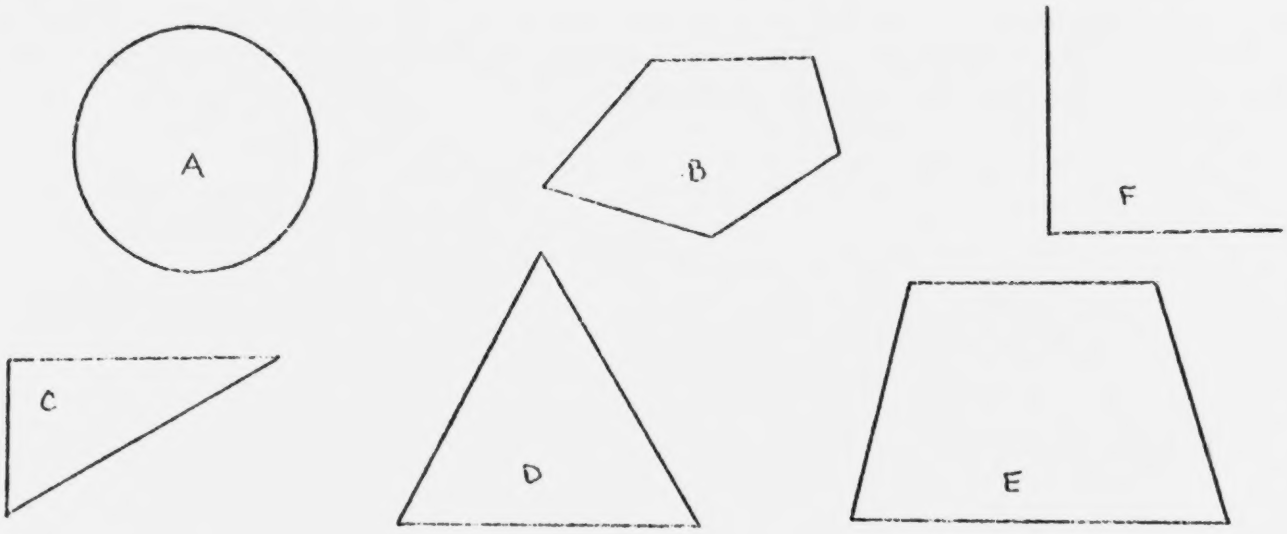
LEVEL E Name ____________________

GEOMETRY Date ____________________

Skill 4



1. Of the figures above, which figure is the picture of an equilateral triangle?

1. D

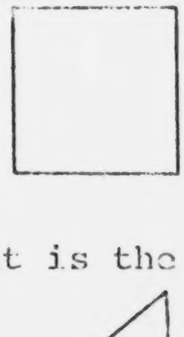
2. Of the figures above, which figure is the picture of a right triangle?

2. C

3. Of the figures above, which figure is the picture of a quadrilateral?

3. E

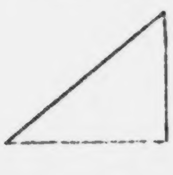
4. What is the name of this figure?



a. equilateral triangle
b. quadrilateral
c. right triangle

4. a

5. What is the name of this figure?



a. equilateral triangle
b. right triangle
c. quadrilateral

5. b

LEVEL E

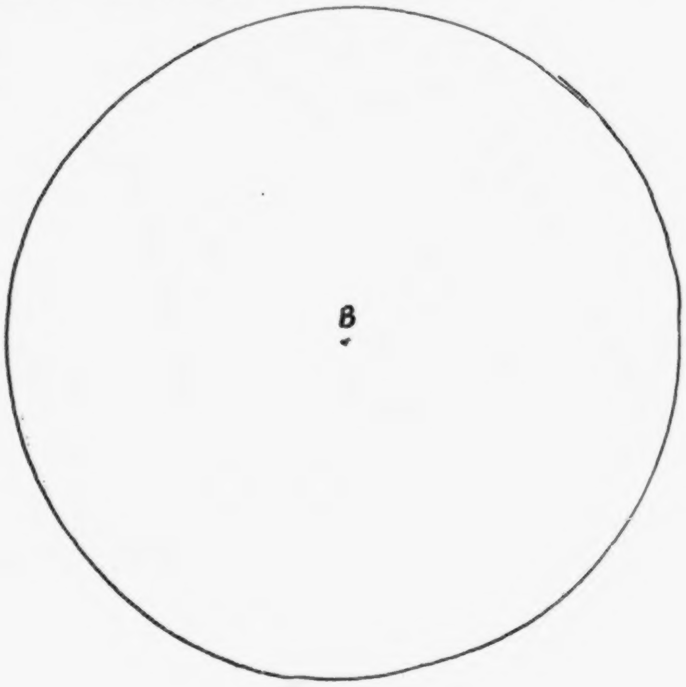
Name ______________________

GEOMETRY

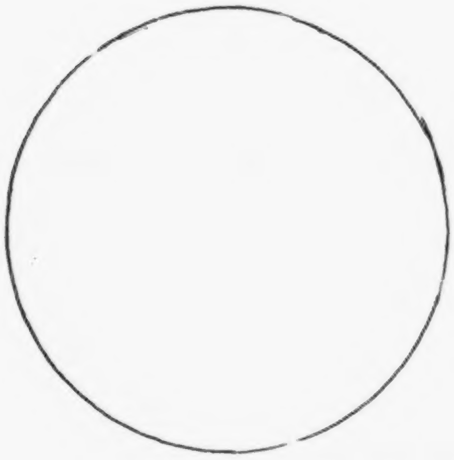
Date ______________________

Skill 5 (Page 1 of 2 pages)

1. Use your compass to draw a circle with a $1\frac{1}{2}$ inch radius that has point B as its center. You may need to use your ruler to get the right measurement on your compass.



2. Use your compass to draw a circle with a diameter of 2 inches.



LEVEL E

GEOMETRY

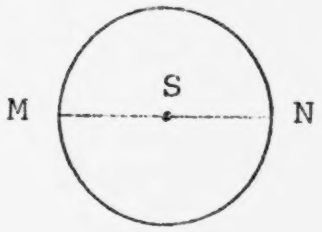
Name ______________________

Date ______________________

Skill 5 (Page 2 of 2 pages)

Measure each radius and diameter in inches.

3.

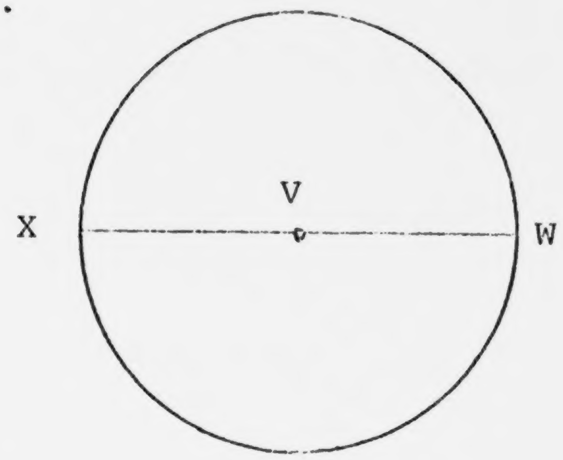


m ($\overline{MS}$) = $\frac{1}{2}$"

m ($\overline{SN}$) = $\frac{1}{2}$"

m ($\overline{MN}$) = 1"

4.



m ($\overline{XV}$) = 1"

m ($\overline{VW}$) = 1"

m ($\overline{XW}$) = 2"

5. The length of a diameter of a circle is two times the length of a radius of a circle.

LEVEL E

GEOMETRY

Skill 6

Name ____________________

Date ____________________

Give the missing numbers.

1. 2 pounds = 32 ounces.

2. 1 ton = 2,000 pounds

3. 5,280 ft. = 1 mile

4. 6,000 lb. = 3 tons

5. If a turkey weighs 24 pounds and 7 ounces, how many ounces does it weigh?

5. 391 ounces

6. If a car weighs 1 ton and 1287 pounds, how many pounds does it weigh?

6. 3,287 pounds

7. 2 tons 900 pounds
+1 ton 1300 pounds
4 tons 200 pounds

8. 1 mile 756 feet
+3 miles 4524 feet
5 miles 0 feet

9. 4 pounds 10 ounces
-1 pound 14 ounces
2 pounds 12 ounces

10. 3 tons 456 pounds
-1 ton 983 pounds
1 ton 1473 pounds

LEVEL E

GEOMETRY

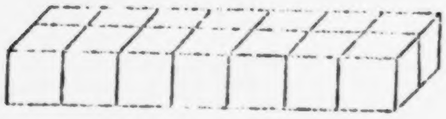
Skill 8, 9

Name ______________________

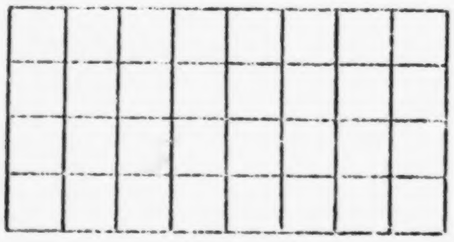
Date ______________________

Give the surface area of each figure. **Use square units.**

1.



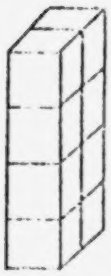
2.



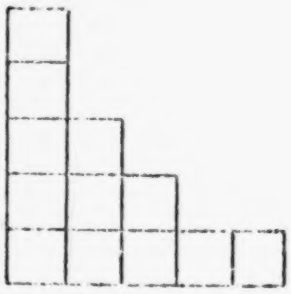
1 46 sq units

2. 32 sq units

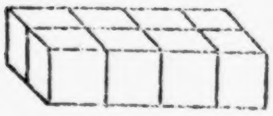
3.



4.



5.



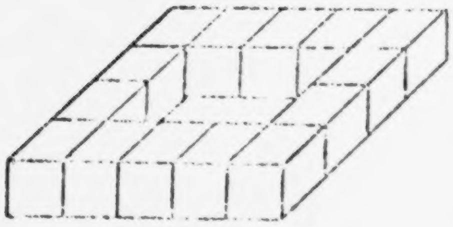
3. 28 sq units

4. 12 sq units

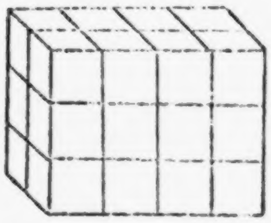
5. 28 sq units

Give the volume of each figure. **Use cubic units.**

6.



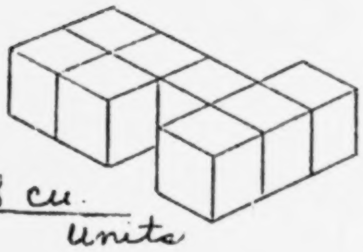
7.



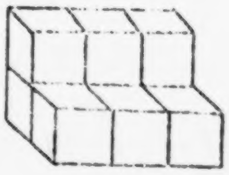
6 14 cu units

7. 24 cu units

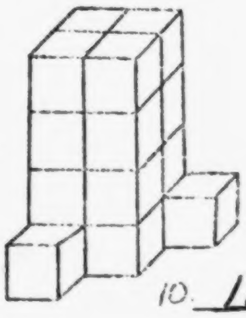
8.



9.



10.



8 8 cu units

9. 9 cu units

10. 18 cu units

LEVEL E

GEOMETRY

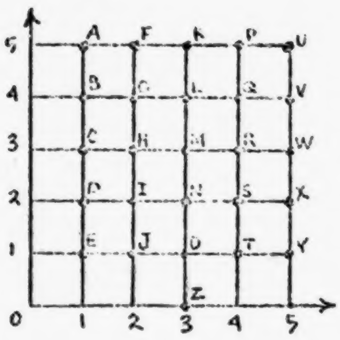
Skill 10

Name ______________________

Date ______________________

Use the number plane to write each of the words as a set of number pairs.

1. TURTLE (4,1), (5,5), (4,3), (4,1), (3,4), (1,1)
2. GROVE (2,4), (4,3), (3,1), (5,4), (1,1)
3. MONKEY (3,3), (3,1), (3,2), (3,5), (1,1), (5,1)
4. SURF (4,2), (5,5), (4,3), (2,5)
5. GARGLE (2,4), (1,5), (4,3), (2,4), (3,4), (1,1)



A F K P U
B G L Q V
C H M R W
D I N S X
E J O T Y
Z
5
4
3
2
1
0
1
2
3
4
5

Use the number plane to name the words.

1. (4,5), (3,4), (1,5), (5,1) play
2. (3,1), (1,3), (1,1), (1,5), (3,2) ocean
3. (2,3), (1,5), (4,5), (4,5), (5,1) happy
4. (1,3), (3,1), (4,4), (5,5), (2,2), (3,2), (1,5) Coquina
5. (1,3), (2,3), (4,3), (2,2), (4,2), (4,1), (3,3), (1,5), (4,2) Christmas

LEVEL E

GEOMETRY

Skill 11 (Page 2 of 2 pages)

Name ____________________

Date ____________________

4. Make a pictograph showing the following information:

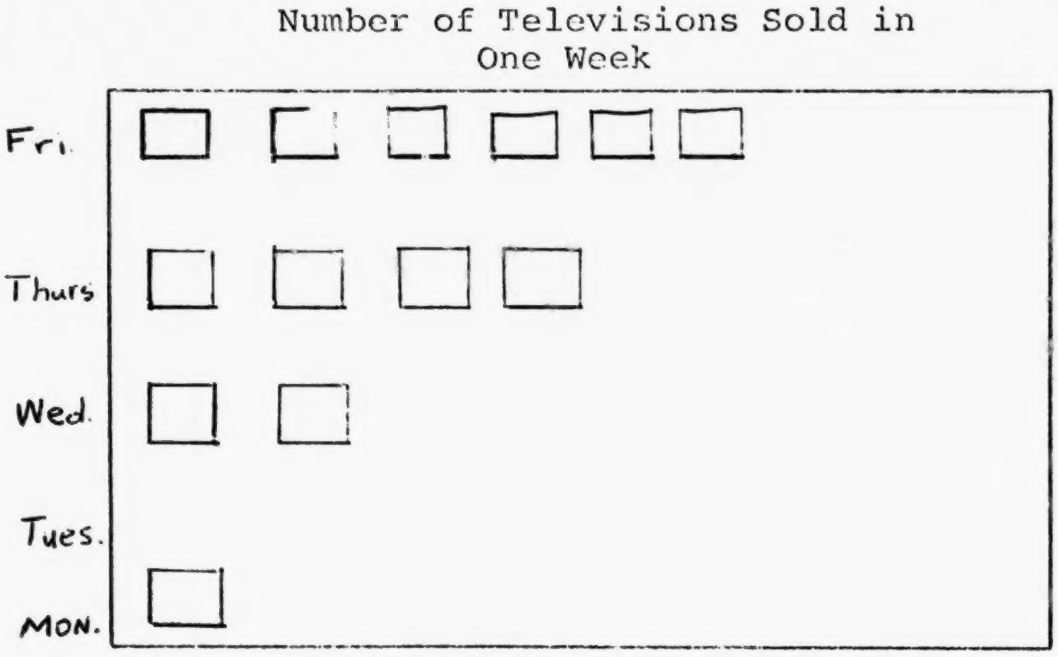
Monday 1

Tuesday 0

Wednesday 2

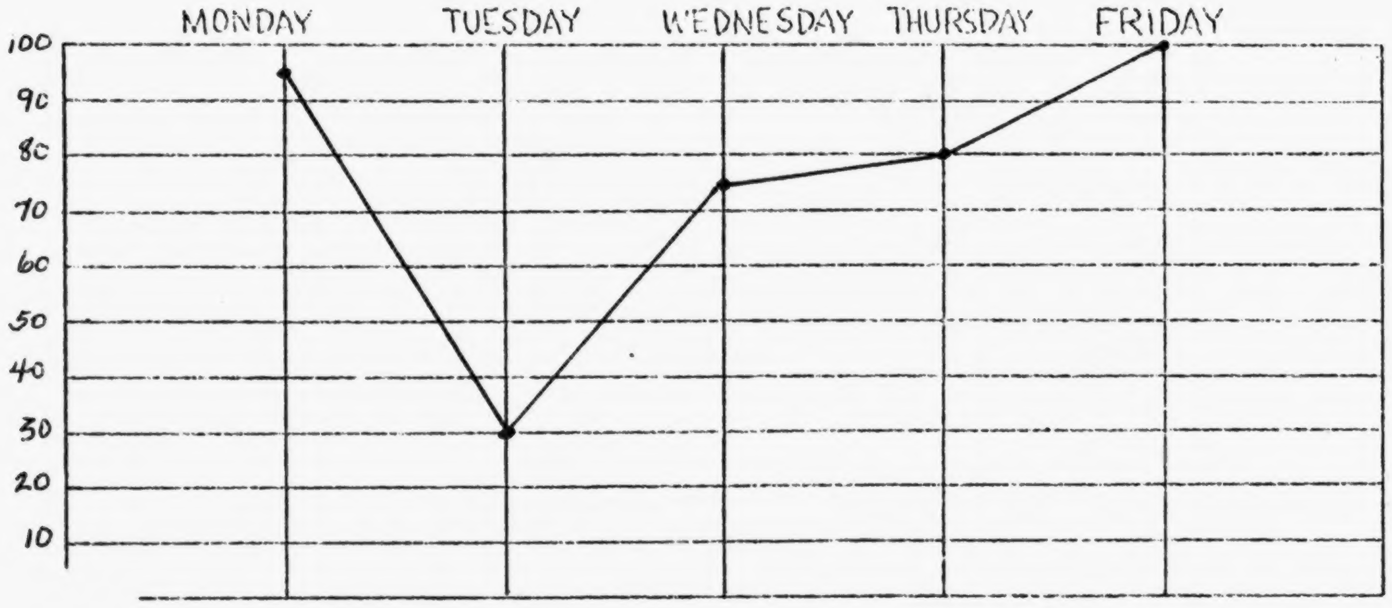
Thursday 4

Friday 6



5. Make a line graph illustrating Jack's spelling test scores.

95% 30% 75% 80% 100%



LEVEL E

TIME

Name ______________________

Date ______________________

Skill 1, 2 (Page 1 of 2 pages)

Choose the correct answer.

1. Many schools start at 8:00 A.M. .

   a. A.M.

   b. P.M.

2. We celebrate New Year's Eve on December 31st.
   The New Year starts at midnight.

   a. noon

   b. midnight

3. Sam's plane from New York left at 2:30 A.M.

   Did he go to the airport in the middle of the afternoon
   or in the middle of the night?

   middle of the night

4. Some Saturday afternoon movies start at 2:00 o'clock.

   a. A.M.

   b. P.M.

   P.M.

5. We use A.M. after midnight and before noon .

LEVEL E

TIME

Skill 1, 2 (Page 2 of 2 pages)

Name ______________________

Date ______________________

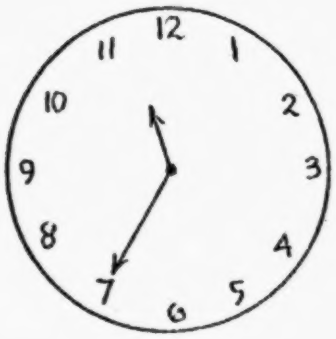
Solve these problems.

6. The tardy bell rings at 7:50 and class begins at 8:00. How many minutes have gone by?

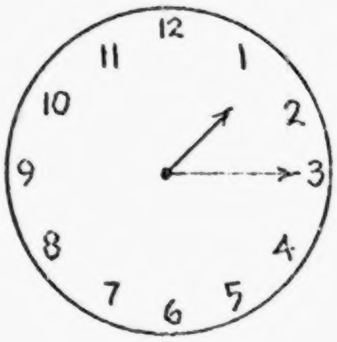
10 minutes

7. How many minutes have passed between the time shown on clock A and clock B?

A.



B.



8. The first class begins at 8:10 and ends at 8:50. How many minutes does the class last?

40 minutes

9. Jack won the race. The race began at 2:30. His time was one minute. What time did he cross the finish line?

2:31

10. Ann began reading at 10:45 A.M. She read until 11:30 A.M. How many minutes did she read?

45 minutes

LEVEL E

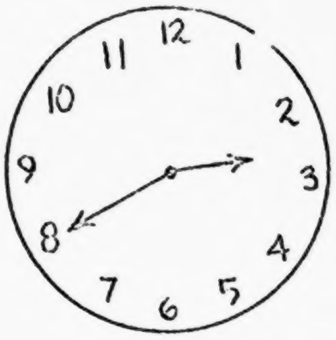
TIME

Skill 3 (Page 1 of 4 pages)

Name ______________________

Date ______________________

Use the pictured clock to answer questions 1, 2, and 3.



1. a. 1 hour and 30 minutes later than the time shown 4:10

   b. 2 hours and 30 minutes earlier than the time shown 12:10

   c. 3 hours and 30 minutes later than the time shown 6:10

2. What time will it be $2\frac{1}{2}$ hours from the time shown on this clock?

2. 5:10

3. What was the time $1\frac{1}{2}$ hours earlier than the time shown on this clock face?

3. 1:10

4. Bob left home at 8:30 A.M. He returned in 1 hour and 30 minutes. What time was it when he got home?

4. 10:00 A.M

5. Lunch period begins at 11:30. Each section of the fourth year class will go to lunch at 3 minute intervals. What time will it be when the 6th section goes to lunch?

5. 11:45

LEVEL E

TIME

Skill 3 (Page 2 of 4 pages)

Name ____________________

Date ____________________

6. Plane

	Leaves	Arrives	Leaves	Arrives
	Cleveland	Jacksonville	Jacksonville	Nashville
A.	9:00 A.M.	11:30 A.M.	12:30 A.M.	2:30 P.M.
B.	11:10 A.M.	1:20 P.M.	2:00 P.M.	5:05 P.M.

1. Plane A. arrives in Jacksonville at: 11:30 A.M.
2. Plane B. leaves Jacksonville at: 2:00 P.M.
3. Plane B. arrives in Nashville at: 5:05 P.M.
4. Plane A. leaves Cleveland at : 9:00 A.M.

7. Plane

	Leaves	Arrives	Leaves	Arrives
	Chicago	St. Louis	St. Louis	Dallas
#69	9:05 A.M.	9:55 A.M.	10:15 A.M.	11:35 A.M.
#16	1:15 P.M.	1:57 P.M.	2:18 P.M.	3:03 P.M.

1. Plane #69 arrives in St. Louis, in the morning, at: 9:55 A.M.
2. Plane #16 leaves St. Louis, in the afternoon, at: 2:18 P.M.
3. How many minutes does #69 plane stay in St. Louis? 20 minutes

LEVEL E Name ______________________

TIME Date ______________________

Skill 3 (Page 3 of 4 pages)

Bus

8.

	Leaves	Arrives	Leaves	Arrives
	Melbourne	Daytona	Daytona	Jacksonville
A.	3:30 A.M.	5:00 A.M.	5:15 A.M.	7:15 A.M.
B.	5:15 P.M.	6:45 P.M.	7:00 P.M.	8:45 P.M.

1. Bus A. arrives in Jacksonville at: 7:15 A.M.
2. Bus B. leaves Daytona at: 7:00 P.M.
3. Which bus arrives in Jacksonville for breakfast? A

Plane

9.

	Leaves	Arrives	Leaves	Arrives
	Melbourne	Tampa	Tampa	Houston
A.	1:45 A.M.	2:45 A.M.	3:15 A.M.	5:30 A.M.
B.	8:15 P.M.	9:15 P.M.	9:45 P.M.	11:55 P.M.

1. Plane A. arrives in Tampa at: 2:45 A.M.
2. Plane B. arrives in Houston at: 11:55 P.M.
3. Plane A. leaves Tampa at: 3:15 A.M.

LEVEL E

TIME

Skill 3 (Page 4 of 4 pages)

Name ____________________

Date ____________________

10. Plane

	Leaves	Arrives	Leaves	Arrives
	St. Louis	Chicago	Chicago	Cleveland
#69	9:00 A.M.	9:57 A.M.	10:18 A.M.	11:00 A.M.
#143	1:12 P.M.	2:02 P.M.	2:31 P.M.	3:14 P.M.

1. If you fly from Chicago to Cleveland, leaving before noon, what time will you leave?

10:18 A.M.

LEVEL E

TIME

Skill 4

Name ______________________

Date ______________________

(Teacher Note: See problem 5.)

1. In fifteen seconds it will be exactly 9:00. The second hand is now on:

    (a) 3

    (b) 6

    (c) [✓ 9]

    (d) 4

2. If a clock runs for 2 minutes and 30 seconds, the second hand goes around:

    (a) 1½ times

    (b) [✓ 2½ times]

    (c) 3½ times

    (d) 1 time

3. Jane said, " I will be there in half a minute." How many seconds would this be?

    3. 30 seconds

4. How many seconds in a minute?

    4. 60 seconds

    How many minutes in an hour?

    60 minutes

5. Using a clock, have students identify time:

    _____ hour, _____ minute, _____ second

LEVEL E

TIME

Skill 5

Name

Date

1. Complete this calendar for December 1970.

1970			DECEMBER			1970
SUN.	MON.	TUES.	WED.	THUR.	FRI.	SAT.
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

2. From the calendar:

What date is the 2nd Friday in December? 11

3. Write December twenty-first, nineteen seventy, using numerals.

12-21-'70 or 12/21/70

4. How many days are in the month of December? 31

5. Paul knows that if November 5 is on a Saturday he can find what day November 15 is by:

adding

What day is it? Tuesday

LEVEL E — Name ______________________

TIME — Date ______________________

Skill 6

1. Joan washed her hair on Saturday. It took 15 minutes to shampoo, ½ hour to put it on curlers, 40 minutes to dry, and 30 minutes to comb. She spent ___1___ hours, ___55___ minutes doing her hair.

2. It took Jack 9 weeks to learn his multiplication facts. It took Jill 17 days to learn hers. How many days longer did it take Jack to learn his?

___46 days___

3. 30 days in a month and 12 months in a year.

	6 yrs.	4 mos.	20 days
−	3 yrs.	5 mos.	22 days
	2 yrs.	10 mos.	28 days

4. 30 days in a month and 12 months in a year.

		3 mos.	17 days
	+	9 mos.	20 days
1 yr.		1 mos.	7 days

5. 60 seconds in a minute and 60 minutes in an hour.

	7 hours	40 mins.	22 secs.
+		30 mins.	44 secs.
	8 hours	11 mins.	6 secs.

LEVEL E Name ______________________________

MONEY Date ______________________________

Skill 1 (Page 2 of 2 pages)

6. Circle the names of the coins which you would receive as change if you bought a baseball glove for $6.89 and gave the clerk $7.00.

[✓ dime] nickel quarter [✓ penny]

7. Circle the names of the coins which you would receive as change if you bought a model car for $1.49 and gave the clerk $2.00.

[✓ penny] dime [✓ half-dollar] nickel

8. Circle the name of the coins which you would receive as change if you bought a pair of shoes for $6.59 and you gave the clerk $6.75.

[✓ nickel] [✓ penny] [✓ dime] quarter

9. Circle the name of the coins which you would receive as change if you bought a toy for 74¢ and gave the clerk $1.00.

[✓ penny] nickel [✓ quarter] dime

10. Circle the names of the money which you would receive as change if you bought a football for $3.64 and gave the clerk $5.00.

[✓ dime] [✓ penny] half-dollar

[✓ quarter] [✓ one dollar]

LEVEL E

MONEY

Skill 2

Name ______________________

Date ______________________

Solve.

1.
32¢
+ 48¢
80¢

2.
$5.70
- 5.45
$ .25

3.
$.96
- .09
$.87

4. $7.50 + $.35 = $7.85

5.
$ 1.87
.17
+26.08
$ 28.12

6.
$9.06
+2.48
$11.54

7.
$21.94
1.09
7.17
.25
$30.45

8.
$1.45
2.35
.39
.19
.22
.17
$4.77

9. $25.38 - $14.56 = $10.82

10. $3.97 - $1.26 = $2.71

LEVEL E   Name ______________________

MONEY   Date ______________________

Skill 4   (Page 1 of 2 pages)

Solve. Label.

1. Carol bought a book for 59¢, a stuffed toy animal for $1.98, and a whistle for 39¢. How much change would Carol receive if she gave the clerk $10?

1. $ .04

2. Scott bought a paint set for $1.25, a toy truck for 89¢, and a gift for his mother for $1.75. How much change would Scott receive if he gave the clerk $5?

2. $1.11

3. Lynn bought a blouse for $3.98 and a skirt for $5.25. What change would Lynn receive if she gave the clerk $10?

3. $ .77

4. Don bought a hot dog for 30¢, some French fries for 25¢, a large coke for 25¢ and two nickel candy bars. How much change would Don receive if he gave the clerk $5?

4. $ 4.10

5. Chris bought a stamp collection for $2.75, a book to put them in for 89¢ and a guide for collecting other stamps for $1.25. How much change would Chris receive if he gave the clerk $5?

5. $ .11

LEVEL E

MONEY

Skill 4 (Page 2 of 2 pages)

Name ______________________

Date ______________________

6. Tom bought a ball glove for $4.95 and a baseball for $3.00. How much change would he receive if he gave the clerk $10?

6. $ 2.05

7. Willy bought a hot dog for 30¢, a drink for 15¢, a bar of candy for 10¢ and a bag of potato chips for 25¢. How much change would he receive if he gives the salesman $1?

7. $ .20

8. Susie saved her allowance for five weeks. She gets $2.00 a week allowance. If she buys a dress for $6.98, how much money will she have left?

8. $ 3.02

9. Billy mowed 8 lawns at $1.25 each. He bought a badminton set for $6.95. What amount does he have left?

9. $ 3.05

10. The 4 boys in the club each paid $2.00 dues. They bought a football game for $5.49 with the money. What amount do they have left?

10. $ 2.51

MATHEMATICS CONTINUUM

LEVEL F

BOOK 5

Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and continuum mastery tests should be used to provide sufficient evidence to check the 70-100% (mastery level) for each skill.

Metric and Non-Metric Geometry have been combined under the heading Geometry.

Money has been keyed to Decimals.

The conversion tables are listed in the Strategy Manual.

LEVEL F

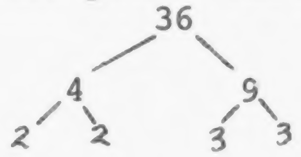
NUMERATION

Review of Level E Skills

	Example Numeration
1. Rounds numbers to nearest thousands, ten thousands and millions. Rule: rounds up from 5.	Add. 13,010 + 18,900 = 31,910 Now round each addend to the nearest ten thousand. Add these to estimate the sum. Compare the estimate with the exact sum. 10,000 + 20,000 30,000
2. Writes and reads the compact numeral for an 8, 9 or 10 place number written in words and writes an 8, 9 or 10 place number in words.	Write the number words for this numeral. 4,138,135,675 = four B, one hundred thirty-eight M, one hundred thirty-five T, six hundred seventy-five
3. Identifies the place value of any digit up to billions' place. Teacher note: Occasionally scramble the order.	Underline the numeral in the hundred thousands place. $9,876,\underline{4}23,951$
4. Uses the exponent to tell how many times the base is used as a factor. When given the product, can identify how many times the base was multiplied by itself. Identifies the base and the exponent or power of a term.	Write the product using a base and an exponent. 10 x 10 x 10 x 10 = 10^4 Write the product. 10^4 = 10,000 Underline the base and circle the exponent. $\underline{10}^{\textcircled{4}}$
5. Writes a compact numeral using exponential notation and vice versa. Only one non-zero digit.	Write this number in expanded form using exponential form. 400 = 4×10^2

Numeration

1.	HM Book 5, pp. 1, 2 10-12, 17, 29		
2.	HM Book 5, pp. 13, 16, 18, 21, 28, 29, 43	HM Masters 5 (4, 5)	
3.			
4.			
5.	HM Book 5, p. 21	HM Masters 5 (5)	

LEVEL F	Example
Numeration	Numeration
6. Lists factors, sets of factors, common factors and greatest common factor.	The factors of 18 are: {1, 2, 3, 6, 9, 18} The factors of 6 are: {1, 2, 3, 6} What is the greatest common factor? 6
7. Lists multiples of a given number; selects common multiples, least common multiple of two or more sets of multiples.	Write the multiples, less than 25 of: 2 {2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24} 5 {5, 10, 15, 20} What is the least common multiple? 10
8. Identifies prime numbers to 100 as a number greater than one with exactly two different factors, itself and one. Expresses composite numbers as the product of prime numbers.	Circle the prime numbers on this chart. 16 ⑤ 10 ③ 46 12 Find the prime factors of: 
9. Identifies number sequences and states the rule for the sequence.	Complete the chart. 1, 0, 2, 0, 3, 0, 4, 0, 5, 0, 6, 0
10. States and uses the divisibility rules to determine if a number is divisible by 2, 3, 4, 5, 6, 9, or 10.	Is 231 divisible by 3? yes How can you determine this? The sum of the digits is a multiple of three, so it is divisible by three.
11. Identifies sets such as empty sets, universal sets, supersets, infinite and finite sets as well as identifying the members of a given set.	Name a set that could be the universe of: M = {horse, sheep, cat, dog} {animals}

Numeration

6.	HM Book 5, pp. 164-167	HM Visuals 5 (12) HM Masters 5 (42)
7.	HM Book 5, pp. 168-171	HM Visuals 5 (13) HM Masters 5 (43)
8.	HM Book5, pp. 172-178	HM Visuals 5 (14) HM Masters 5 (44, 45)
9.	HM Book 5, pp. 38, 39, 44, 81, 104, 138-141, 180, 181	HM Visuals 5 (3, 10, 15) HM Masters 5 (10, 40)
10.	HM Book 5, pp. 182-185	
11.	HM Book 5, pp. 3-5, 9	HM Masters 5 (1, 3)

LEVEL F

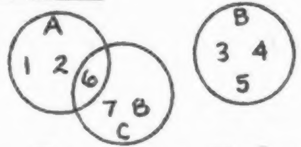
Numeration

12. Interprets relationship between sets or subsets as being disjoint, intersecting, equal, equivalent, etc.

13. In-Depth.

Example

Numeration



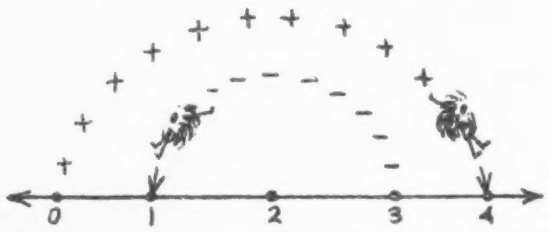
Answer True or False.

Set B is disjoint from set C. T

Set C is equal to set B. F

Set C is equivalent to set B. T

ADDITION AND SUBTRACTION



Review of Level E Skills

1. Adds or subtracts with renaming or regrouping for four or more digits.

2. Solves word problems requiring addition or subtraction skills mastered to this point. Teacher note: Use the five-step method, student's page 45.

Addition and Subtraction

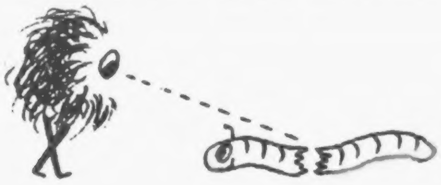
Add or subtract.

$$\begin{array}{r} 7,865 \\ 5,947 \\ +\ 8,433 \\ \hline 22,245 \end{array} \qquad \begin{array}{r} 5,864 \\ -\ 2,959 \\ \hline 2,905 \end{array}$$

Textual Resources	Related Resources	Notes
Numeration		
12. HM Book 5, pp. 6, 8, 9	HM Visuals 5 (1) HM Masters 5 (3)	
13. HM Book 5, pp. 22-24, 30, 31, 63, 187-191, 193		
Addition and Subtraction		
HM Book 5, pp. 32-37, 40-42, 44, 47-49, 52, 53, 316	HM Visuals 5 (4) HM Masters 5 (7-9, 11-13, 15)	
1. HM Book 5, pp. 50, 54, 60, 317-319	HM Visuals 5 (4) HM Masters 5 (14, 16, 17)	
2. HM Book 5, pp. 45, 46, 51		

LEVEL F

MULTIPLICATION AND DIVISION



Review of Level E Skills	Example Multiplication and Division
1. Uses the commutative and associative properties to simplify multiplication; the distributive property to simplify multiplication and division for one and two digit numbers.	Fill in each $\square$. $(12 \times 8) \times 5 = \boxed{12} \times (8 \times 5)$ $= \boxed{12} \times \boxed{40}$ $= \boxed{480}$ $(36 \div 4) + (24 \div 4) = (36+24) \div \boxed{4}$ $= \boxed{60} \div 4$ $= \boxed{15}$
2. Uses the multiplication algorithm for a two digit number times a two or more digit number.	Find the products. $\begin{array}{r} 27 \\ \times\ 35 \\ \hline 945 \end{array} \qquad \begin{array}{r} 146 \\ \times\ 23 \\ \hline 3358 \end{array}$
3. Demonstrates mastery of multiplication and division facts of the 11's and 12's tables through 12 x 12.	Find the products or quotient. $\begin{array}{r} 11 \\ \times\ 8 \\ \hline 88 \end{array} \quad \begin{array}{r} 12 \\ \times\ 6 \\ \hline 72 \end{array} \quad \begin{array}{r} 12 \\ \times\ 12 \\ \hline 144 \end{array} \quad \begin{array}{r} 11 \\ \times\ 12 \\ \hline 132 \end{array}$ $108 \div 12 = 9 \qquad 121 \div 11 = 11$
4. Divides a three or more digit dividend by a one digit divisor. Writes remainders as fractions as well as whole number remainders.	Divide. Write the remainder using an R. $\begin{array}{r} 64 \text{ R.5} \\ 6\overline{)\ 389} \end{array}$ Divide. Write the remainder as a fraction. $\begin{array}{r} 10\frac{3}{8} \\ 8\overline{)\ 83} \end{array}$
5. Estimates the quotient by rounding the divisor and/or dividend.	Round the divisor and dividend, then estimate the quotient. $\begin{array}{r} 40 \\ 48\overline{)1920} \end{array} \qquad \begin{array}{r} 40 \\ 50\overline{)2000} \end{array}$
6. Divides a two or more digit dividend by a two digit divisor.	Divide. $\begin{array}{r} 40\frac{1}{48} \\ 48\overline{)1921} \end{array}$

Textual Resources	Related Resources	Notes
Multiplication and Division		
HM Book 5, pp. 98, 99 103, 105, 106, 118-120 123	HM Visuals 5 (9) HM Masters 5 (27-30, 35)	
1. HM Book 5, pp. 14, 15, 102, 320, 322	HM Visuals 5 (2)	
2. HM Book 5, pp. 108-111, 113, 321	HM Masters 5 (31, 32)	
3.		
4. HM Book 5, pp. 121-124, 323	HM Visuals 5 (9) HM Masters 5 (36)	
5. HM Book 5, pp. 128, 129	HM Masters 5 (38)	
6. HM Book 5, pp. 126, 127, 324	HM Visuals 5 (9) HM Masters 5 (37)	

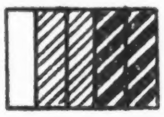
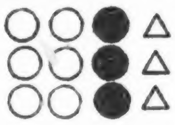
LEVEL F Multiplication and Division	Example Multiplication and Division
7. Uses fractional notation, vertical form and standard algorithm for writing and solving a division problem.	Write this problem in two other division forms. $\frac{35}{5} = 7$ $35 \div 5 = 7$ $\begin{array}{r}7\\5\overline{)35}\end{array}$
8. Uses the symbol Ⓧ to indicate cross products and pair sets.	Set A {chocolate, vanilla} Set B {cherry, pineapple, banana} Set A Ⓧ B {chocolate - cherry chocolate - pineapple chocolate - banana vanilla - cherry vanilla - pineapple vanilla - banana}
9. Finds average, range and median numbers from given data.	Name the range, average and median numbers in this set. {29, 81, 62, 84, 97, 67, 28, 17, 61} 80 range, 58 average, 62 median
10. Writes a number from 1 through 9, multiplied by itself a number of times, in exponential form.	Write this product using exponents. $3 \times 3 \times 3 \times 3 = \underline{3^4}$
11. Solves one or two-step word problems requiring multiplication or division skills mastered to this point. Teacher note: Use the five-step method, student's page 45.	There are 450 sacks of potatoes on a truck. If each sack weighs 25 pounds, how many pounds are there on the truck? 11,250 lbs.
12. Mixed Practice.	
13. In-Depth.	

Textual Resources	Related Resources	Notes
Multiplication and Division		
7.		
8. HM Book 5, pp. 100, 101, 134-138	HM Visuals 5 (10) HM Masters 5 (26, 39)	
9. HM Book 5, pp. 156-159, 284, 285	HM Masters 5 (41)	
10. HM Book 5, p. 20		
11. HM Book 5, pp. 113, 325		
12. HM Book 5, pp. 80, 116, 131, 132, 162, 205, 314	HM Masters 5 (46, 80)	
13. HM Book 5, pp. 63, 133, 163, 179	HM Visuals 5 (10)	

Review of Level F Skills

LEVEL F FRACTIONS	Example Fractions
1. Renames fractions without the aid of pictures.	Rename this fraction. $\frac{2 \times 2}{3 \times 2} = \frac{a}{6}$ $a=4$
2. Writes equivalent fractions, improper to mixed number form and conversely. Gives the simplest name for any fraction of a/b form.	Reduce to lowest terms. $\frac{6}{5} = 1\frac{1}{5}$
3. Finds and uses the lowest common denominator for working addition and subtraction problems without pictures. Uses the commutative, associative and inverse properties in checking problems.	Find the value for the letters. $\frac{1}{2} + \frac{1}{4} = \frac{a}{4} + \frac{1}{4} = \frac{b}{4}$ $a = 2$ $b = 3$
4. Adds and subtracts combinations of fractions. Expresses answers in lowest terms.	Add. Always reduce to lowest terms. $\begin{array}{r} 7\ 1/8 \\ +\ 8\ 1/4 \\ \hline 15\ 3/8 \end{array}$
5. Fills in the missing relation or operation symbol to make a fractional number sentence true.	Put >, < or = in each ○ . 4/5 $\textcircled{<}$ 9/10 9/7 $\textcircled{>}$ 1 1/7
6. Rearranges groups of fractions into an ordered set from largest to smallest or smallest to largest.	Put these fractions in order from smallest to largest. 7/4, 2 1/8, 4/5, 9/10 9/10, 4/5, 7/4, 2 1/8

Textual Resources	Related Resources	Notes
Fractions		
HM Book 5, pp. 194-200, 208, 209, 228, 290	HM Masters 5 (47, 48)	
1. HM Book 5, pp. 210-213	HM Visuals 5 (16) HM Masters 5 (52, 53)	
2. HM Book 5, pp. 214-217, 232, 234	HM Visuals 5 (17-19) HM Masters 5 (54, 57)	
3. HM Book 5, pp. 230, 233, 235-239	HM Visuals 5 (20) HM Masters 5 (57-61)	
4. HM Book 5, pp. 229, 242-244, 246, 247, 275	HM Masters 5 (62, 63)	
5. HM Book 5, p. 249		
6.		

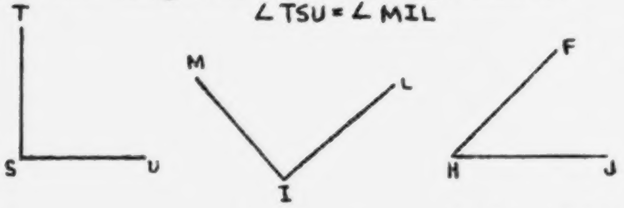
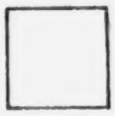
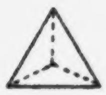
LEVEL F	Example
Fractions	**Fractions**
7. Multiplies or divides a whole number by a fraction or vice versa, with or without the use of pictures.	Multiply. $1 \times \frac{2}{3} = \frac{2}{3}$ Find the value of a.  $\frac{4}{5} \div a = \frac{2}{5}$ $a = 2$
8. Multiplies a fraction by a fraction using pictures.	Multiply using pictures for answers.  $\frac{1}{3} \times \frac{3}{4} = \frac{1}{4}$
9. Solves word problems using skills learned to this point. Teacher note: Use the five-step method, student's page 45.	Solve. John had 1 1/2 pies. He divided them equally among 6 friends. How much pie did each person get? 1/4 pie
10. In-Depth.	

DECIMALS	Decimals
1. Identifies the decimal point and recognizes that the decimal point is placed between the ones and the tenths position.	one and three tenths = 1.3
2. Reads and writes decimals using the word "and" to locate the decimal point.	Write this number in words. 39.78 thirty-nine and seventy-eight hundredths

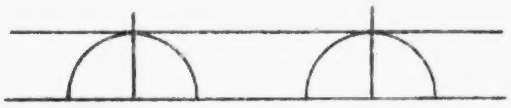
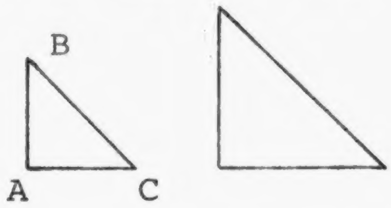
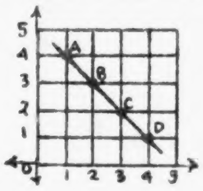
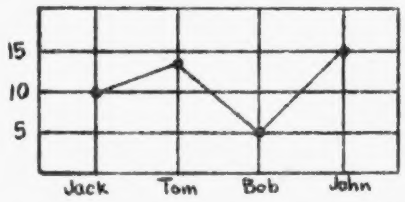
Textual Resources	Related Resources	Notes
Fractions		
7. HM Book 5, pp. 201, 206, 207, 290-293, 308, 309, 315, 326, 329	HM Masters 5 (49, 51, 71, 72, 77)	
8. HM Book 5, pp. 202, 203, 302, 303	HM Masters 5 (75)	
9. HM Book 5, pp. 142, 204, 231	HM Masters 5 (50)	
10. HM Book 5, pp. 218-222, 224, 225, 227, 240, 248, 250, 251, 256, 257, 259, 288, 294-299, 304-307, 310, 312, 312, 327-328, 340	HM Visuals 5 (24) HM Masters 5 (55, 56, 64, 65, 73, 74, 76, 78)	
Decimals		
1. HM Book 5, pp. 330, 332, 333		
2.		

LEVEL F	Example
Decimals	Decimals
3. Renames common fractions with denominators of ten or a hundred in decimal form, and conversely.	Rename these fractions as decimals. $\frac{8}{10} = .8$ $\frac{4}{100} = .04$
4. Orders a collection of decimals to the hundredths position.	Put these decimals in order from smallest to largest. .06, 6.6, .6, 6.06, 6.0 .06, .6, 6.0, 6.06, 6.6
5. Adds and subtracts two decimal numbers to the hundredths position.	Add or subtract. $\begin{array}{r} .2 \\ + \ .5 \\ \hline .7 \end{array} \qquad \begin{array}{r} 3.92 \\ - \ 1.84 \\ \hline 2.08 \end{array}$
6. Multiplies decimal fractions by whole numbers and conversely.	Multiply. $\begin{array}{r} 9 \\ \times \ .5 \\ \hline 4.5 \end{array} \qquad \begin{array}{r} .06 \\ \times \ 11 \\ \hline .66 \end{array}$
7. Solves word problems using decimals. Teacher note: Use the five-step method, student's page 45.	The Daytona Speedway track record was 146.2 m.p.h. The Firecracker 400 was run at 152.8 m.p.h. How much greater was the new record? 6.6 m.p.h.
8. Uses the four operations to solve word problems involving money.	How many 79¢ notebooks can be bought for $4.05? How much change would be left? 5 notebooks 10¢ change
9. Mixed Practice.	
10. In-Depth.	

Textual Resources	Related Resources	Notes
Decimals		
3. HM Book 5, pp. 330-333		
4.		
5. HM Book 5, pp. 56, 331, 334	HM Masters 5 (79)	
6. HM Book 5, p. 336		
7. HM Book 5, p. 337		
8. HM Book 5, pp. 57, 107, 112, 125, 127, 142, 143	HM Visuals 5 (9) HM Masters 5 (33)	
9. HM Book 5, p. 339		
10. HM Book 5, pp. 335, 338, 340, 341		

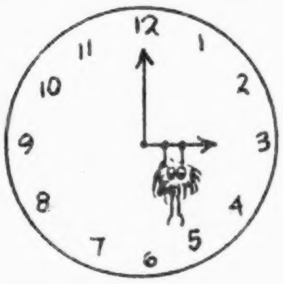
LEVEL F	Example
GEOMETRY	Geometry
Review of Level E Skills Ray, Angle, Vertex, Bisect Everyday measures	
1. Measures perimeters of various polygons.	Measure the side, then name the perimeter.
2. Measures and constructs angles with the use of a protractor. Utilizes information to determine congruency of angles.	Which angles are congruent. $\angle TSU = \angle MIL$ 
*3. Measures and constructs polygons, right triangles, parallelograms, rectangles and squares with the use of a protractor and ruler.	Construct a polygon with all its sides congruent. 
*4. Identifies or constructs models of simple closed surfaces such as rectangular prism, triangular prism, tetrahedron, rectangular pyramid, and pentagonal pyramid.	The following drawing shows a tetrahedron. 
5. Identifies, constructs or locates the following elements related to a circle: center, diameter, radius, chord, arc, semicircle.	A line segment joining two points on a circle is called a chord.

Textual Resources	Related Resources	Notes
Geometry		
HM Book 5, pp. 66-68, 76, 84-47 HM Book 5, pp. 64, 65	HM Visuals 5 (6) HM Masters 5 (19, 23 24)	
HM Book 5, pp. 19, 58, 59	HM Visuals 5 (5) HM Masters 5 (18)	
1. HM Book 5, p. 69	HM Masters 5 (20)	
2. HM Book 5, pp. 70-73	HM Masters 5 (21)	
3. HM Book 5, pp. 74, 75	HM Masters 5 (22)	
4. HM Book 5, pp. 82, 83	HM Visuals 5 (7)	
5. HM Book 5, pp. 262, 263		

LEVEL F	Example
Geometry	Geometry
6. Constructs parallel and perpendicular line segments using a compass. Uses these to construct parallelograms, rectangles and squares.	Draw two parallel line segments using a compass and ruler. 
7. Identifies or constructs triangles using concepts of congruency and/or similarity.	Construct a triangle similar to △ ABC. 
8. Gives the ordered pair for a point in a number plane or conversely. Locates a point in the plane using a given ordered pair.	In the number plane use pairs of whole numbers to name: A = 1,4, B = 2,3 
9. Uses the concept of numbered planes to read and construct bar bar and line graphs.	Which boy read the most books? John 
10. Solves word problems using the skills learned to this point. Teacher note: Use the five-step method, student's page 45.	The square in the town where Farmer Brown shops is 60 yards on one side. If you walk around the square how many yards would you walk? 240 yards
11. Performs conversions between two metric measures of length, weight or capacity. Student is to be supplied with conversion tables.	Name the number of meters in: 35 kilometers = 35,000 m. 3 kilometers, 423 meters = 3423 m.

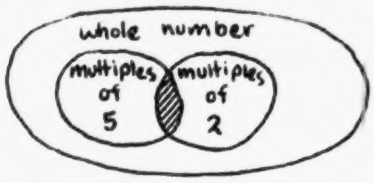
Textual Resources	Related Resources	Notes
Geometry		
6. HM Book 5, pp. 264, 265	HM Visuals 5 (21)	
7. HM Book 5, pp. 266, 267, 276-279	HM Masters 5 (67)	
8. HM Book 5, pp. 88-91, 280, 281	HM Visuals 5 (8)	
9. HM Book 5, pp. 91-93	HM Masters 5 (25)	
10. HM Book 5, p. 78		
11. HM Book 5, p. 27		

LEVEL F	Example
Geometry	Geometry
12. Performs conversions between metric and English system of measurement. Student is to be supplied with conversion tables.	Name the approximate number of quarts in: 2 liters = about 2 quarts 27 liters = about 29 quarts
13. Mixed Practice.	
14. In-Depth.	

TIME	Time
	
1. Adds and subtracts units of time for problem situations which extend beyond 12:00; e.g., "three hours later than 11:00 p.m. is 2:00 a.m."	Write the time in the blank. 6 hours and 30 minutes later than 9:00 p.m. is 3:30 A.M.
2. Writes equivalent values for the following: decade, fortnight, score and century. States number of days in a leap year.	How many years are there in 2 1/2 decades? 25 years
3. Converts time between 24 hour and 12 hour clocks.	A 24-hour clock reads 16:30. What time is this on a 12 hour clock? 4:30 P.M.
4. Solves problems which require time zone changes between the four major time zones in the U.S.	A plane leaves Chicago (CS at 3:00 p.m. It arrives in San Francisco 3 1/2 hours later. What time is it in San Francisco (PST) when th plane arrives? 4:30 P.M

Textual Resources	Related Resources	Notes
Geometry		
12. HM Book 5, p. 26		
13. HM Book 5, pp. 79, 94, 95, 192, 226, 241, 258, 300	HM Masters 5 (46)	
14. HM Book 5, pp, 77, 97, 114, 115, 260, 261, 268-274, 282, 283, 286, 287, 289	HM Visuals 5 (22, 23) HM Masters 5 (34, 66, 68-70)	
Time		
1. HM Book 5, p. 186		
2.		
3.		
4.		

LEVEL F	Example
Time	**Time**
5. Solves problems which involve a change between daylight savings and standard times. States the reason daylight savings time is used.	A plane leaving Fairbanks, Alaska, at 1 a.m. arrives in Seattle at 6 a.m. In the summer, when Seattle is on daylight savings time and Fairbanks is not, what time is it when the plane arrives? 5:00 A.M. .

SPECIAL TOPICS	Special Topics
1. Selects outcomes possible from a collection of objects.	In a box containing 7 marbles; 3 of which are blue, what are your chances of picking a marble that is not blue? 4/7
2. Interprets set-subset statements using the terms "all", "some", "none", "any", "if-then" and "if not-then".	If all squares are rectangles, can some squares be triangles? No
3. Uses Venn diagrams (set diagrams) to picture or interpret union and intersection of sets.	If: A = {set of whole numbers} B = {multiples of 5} C = {multiples of 2}  Is the set of whole numbers a multiple of 5? No

Textual Resources	Related Resources	Notes
Time		
5.		
Special Topics		
1. HM Book 5, pp. 252-255		
2. HM Book 5, pp. 3, 146-155	HM Visuals 5 (11)	
3. HM Book 5, p. 7	HM Visuals 5 (1) HM Masters 5 (2)	

LEVEL F

Special Topics

4. Mixed Practice.

Example

Special Topics

Textual Resources	Related Resources	Notes
Special Topics 4. HM Book 5, pp. 160, 161		

LEVEL F

TESTS

and

ANSWER KEYS

LEVEL F Name ______________________

NUMERATION Date ______________________

Skill 1

Round to the nearest 100.

1. 444 ____ 2. 1679 _____ 3. 1,111,111 ________

Round to the nearest 1000.

4. 400 _____ 5. 5,555 _____ 6. 1,768,982 ______________

Round to the nearest 100,000.

7. 478,562 __________ 8. 987,654,320 _______________

9. 768,032,999 _______________ 10. 85,743,279 ________________

LEVEL F Name ______________________

NUMERATION Date ______________________

Skill 9

Fill in the blanks.

1. 1,4,9,__,25,36,___,___,81,___,___

2. 1,2,2,3,3,3,___,___,4,___,5,___,___,___ ,____

3. 2,5,11,___,___,95,___

4. 17,13,18,14,___,___,20,___,___

5. 4,16,___,___,1024

LEVEL F
NUMERATION
Skill 2, 3

Name ______________________
Date ______________________

Write the number words for these numerals.

1. 34,135,675 1. ______________________

2. 89,406,525 2. ______________________

3. 246,987,503 3. ______________________

Write the compact numeral for these number words.

4. Five hundred thousand, five hundred fifty 4. __________

5. Thirty-three thousand, three hundred sixty-eight. 5. __________

Write the place value of the underlined digit.

6. $55{,}5\underline{5}5{,}555$ ______________ 7. $123{,}456{,}78\underline{9}$ ______________

8. $1\underline{0}1{,}010{,}101$ ______________ 9. $89{,}\underline{6}43{,}205$ ______________

10. $\underline{9}87{,}654{,}321$ ______________________

LEVEL F

NUMERATION

Skill 4, 5

Name ____________________

Date ____________________

Write these products using a base and exponent.

1. $10 \times 10 \times 10 \times 10 =$ 1.______________

2. $10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 =$ 2.______________

Write the products.

3. $10^6 =$ 3.______________

4. $10^9 =$ 4.______________

5. $10^7 =$ 5.______________

In the following, underline the base and draw a circle around its exponent.

6. 10×10^6

7. 7×10^4

Write these numbers in expanded form using exponential notation.

8. 90 = 8.______________

9. 60,000 = 9.______________

10. 7,000,000 = 10.______________

LEVEL F
NUMERATION
Skill 6, 7

Name ____________________
Date ____________________

List the factors of each number and the greatest common factor for each pair of numbers.

1. 8 ____________________
12 ____________________
GCF ____________

2. 70 ____________________
35 ____________________
GCF ____________

3. 9 ____________________
24 ____________________
GCF ____________

List the next five multiples for each number and the least common multiple for each pair of numbers.

4. 4 ____________________
5 ____________________
LCM ____________

5. 12 ____________________
10 ____________________
LCM ____________

LEVEL F Name ________________

NUMERATION Date ________________

Skill 8

Write the prime factors of the following numbers.

1. 37 1. ________

2. 9 2. ________

3. 79 3. ________

4. 85 4. ________

5. Which of the above numbers are prime? ________________

LEVEL F Name ________________

NUMERATION Date ________________

Skill 10

Use the divisibility rule for 2,3,4,5,6,9, and 10 of the following numbers.

1. 60 ________________ 2. 135 ________________

3. 4321 ________________ 4. 246,420 ________________

5. What is the rule for testing a number for divisibility by 3?

____

LEVEL F

NUMERATION

Skill 11, 12

Name ____________________________

Date ____________________________

Name a set that could be the universe for:

1. M = {apple, peach, pear, plum} ________________________________
2. B = {New Zealand, Australia, Puerto Rico} __________________________

set A = {all dog breeds}

set B = {all dog breeds in America}

set C = {beagle, shepherd, chihuahua}

set D = {beagle, basset hound, bird dog}

set E = {Siamese cats}

set F = {shepherd, beagle, chihuahua}

Use the above information to decide if the following relations are true or false.

3. set A is a subset of B ____________
4. set B is a subset of A ____________
5. set C is a subset of B ____________
6. set C and D are equivalent sets ________
7. set C and F are equal sets ________
8. set E is a subset of A _________
9. set E is disjoint ________
10. set C and D intersect ________

LEVEL F

ADDITION AND SUBTRACTION

Skill 1

Name ______________________

Date ______________________

Add.

1. 17,865
   25,947
   23,102

2. 48,751
   1,934
   27,254

Subtract.

3. 25,209
   16,472

4. 19,275
   10,986

5. 15,000
   13,401

LEVEL F

ADDITION AND SUBTRACTION

Skill 2

Name ______________________

Date ______________________

Solve and label your answers.

1. Mr. Green's speedometer registered 7492 miles when he started on a trip to Tallahassee and 8234 miles when he returned. How many miles did he travel?

   ____

2. Ron plays quarterback for the Panthers. During the season, he carried the ball for 175 yards in one game, 135 yards in another and 162 in the last game. What was the total yardage Ron carried the ball?

   ____

3. Mr. White raised 2092 bushels of apples in his orchard this year. Last year he raised 1737 bushels. How many more bushels did he raise this year than last year?

   ____

4. The Pacific Ocean has an average depth of 14,048 feet and the Atlantic Ocean has an average depth of 12,880. How much deeper is the average depth of the Pacific Ocean than the Atlantic?

   ____

5. If 25,426 children under twelve, 14,539 children over twelve and 21,987 adults visited Disneyland in one day, what was the total number of people there that day?

   ____

LEVEL F

MULTIPLICATION AND DIVISION

Skill 1

Name ____________________

Date ____________________

By using the commutative, associative or distributive properties, simplify the following:

1. 18 x 8 = (__ x 8) + (8 x 8)

2. 27 x 40 = 27 x (__ x __) = (27 x 4) x 10

3. Use associative property to simplify.

   (3 x 4) x 5 = __________

   Use distributive property to simplify.

4. (__ x 8) + (13 x 8) = (12 + __)x __

5. (54 ÷ __) + (__ ÷ __) =(__ + 27) ÷ 9

LEVEL F

MULTIPLICATION AND DIVISION

Skill 2, 4

Name ____________________

Date ____________________

Multiply.

1. $\begin{array}{r}27\\ \underline{14}\end{array}$

2. $\begin{array}{r}144\\ \underline{26}\end{array}$

3. $\begin{array}{r}57642\\ \underline{79}\end{array}$

Divide.

Write remainder as whole number.

Write remainder as fraction.

4. $7\overline{)\,14562}$

5. $9\overline{)\,38976}$

LEVEL F Name ____________________

MULTIPLICATION AND DIVISION Date ____________________

Skill 3

1. $\begin{array}{r} 12 \\ \times\ 12 \\ \hline \end{array}$ 2. $\begin{array}{r} 11 \\ \times\ 8 \\ \hline \end{array}$ 3. $11\overline{)\,121}$ 4. $12\overline{)\,96}$

5. A farmer's wife collected 72 eggs. How many dozen eggs were collected?

____

LEVEL F Name ____________________

MULTIPLICATION AND DIVISION Date ____________________

Skill 10

Write each product using exponents.

1. 3 x 3 x 3 x 3 = 1. ____________________

2. 7 x 7 = 2. ____________________

3. 4 x 4 x 4 x 4 x 4 = 3. ____________________

4. 8 x 8 x 8 = 4. ____________________

5. 9 x 9 x 9 x 9 x 9 x 9 x 9 = 5. ____________________

LEVEL F

Name ________________________

MULTIPLICATION AND DIVISION

Date ________________________

Skill 5, 6

Round the divisor to nearest ten, dividend to nearest hundred. Estimate the answer.

1. 476 ÷ 23 ____________

2. 322 ÷ 45 ____________

3. 962 ÷ 97 ____________

4. 178 ÷ 39 ____________

5. 647 ÷ 71 ____________

Divide by standard algorithm; write answer in fractional form.

6. $23\overline{)\,476}$

7. $45\overline{)\,322}$

8. $97\overline{)\,962}$

9. $39\overline{)\,178}$

10. $71\overline{)\,647}$

LEVEL F Name ____________________

MULTIPLICATION AND DIVISION Date ____________________

Skill 7

Write each problem in two other division forms.

1.	$\frac{35}{5}$	________	________
2.	________	$76 \div 7$	________
3.	________	________	$93\overline{)\,178}$
4.	________	________	$7\overline{)\,1432}$
5.	$\frac{9382}{27}$	________	________

LEVEL F Name ____________________

MULTIPLICATION AND DIVISION Date ____________________

Skill 8

set A = {banana, cherry, strawberry}

set B = {vanilla, chocolate, peach}

set C = $A \otimes B$

1. Write the members of set A x B

____

____

____

Write T or F to show whether statements about the above sets are true or false.

2. $n(A) \times n(B) = n\,(A \times B)$ ____

3. $n(A) + n(B) = n(A \times B)$ ____

4. $n(A \times B) = n(A+B)$ ____

5. $n(A \times B) = n\,(C)$ ____

LEVEL F

MULTIPLICATION AND DIVISION

Skill 9

Name ____________________

Date ____________________

Name the average, range, and median for the data.

		Average	Range	Median
1.	68, 38, 97, 56, 71	____	____	____
2.	36, 45, 23, 17, 44	____	____	____
3.	1500, 50, 90, 80, 150	____	____	____

4. Frank played golf on Monday, Wednesday, and Thursday. He shot a 78, 86 and 67. What was his average for the three days?

____

5. Matt averaged 126 catches in 9 innings. What was his average number of catches per inning in the game?

____

LEVEL F   Name ______________________________

MULTIPLICATION AND DIVISION   Date ______________________________

Skill 11

Solve and label.

1. One day when Jane and Ned went to Niagara Falls, 1320 people rode across the Whirlpool on the cableway. Thirty people went in the cablecar each trip. How many trips did the cablecar make that day?

____

2. A jet plane traveling 1360 miles per hour is going very fast. The Wright brothers' plane flew about 34 miles per hour. How much faster is the jet than the Wright brothers' plane?

____

3. Jan drove 432 miles to Atlanta. Twenty-four gallons of gasoline were used. What was the average number of miles traveled per gallon?

____

4. Mr. Weeks bought 25 crates of grapefruit and 40 crates of oranges. If each crate weighed 30 pounds, how much did they weigh together?

____

5. Each school has 18 classrooms. Each classroom has 32 students. How many students in 44 schools?

____

LEVEL F

FRACTIONS

Skill 1, 2

Name ______________________________

Date ______________________________

Complete the equation.

1. $\frac{2}{3} = \frac{a}{6}$ a = _____

2. $\frac{1}{2} = \frac{1 \text{x} d}{2 \text{x} e} = \frac{5}{10}$ $\frac{d}{e}$ = _____

3. $\frac{1}{3} \times \frac{b}{c} = \frac{3}{9}$ $\frac{b}{c}$ = ___

4. $\frac{3}{4} \times \frac{f}{g} = \frac{6}{8}$ $\frac{f}{g}$ = _____

List the next three equivalent fractions.

5. $\frac{3}{5}$ = _____, _____, _____

6. $\frac{7}{9}$ = _____, _____, _____

Change to mixed fractions. Put answer in lowest terms.

7. $\frac{9}{2}$ = _____

8. $\frac{16}{10}$ = _____

Change the mixed fractions to improper fractions.

9. $7\frac{3}{8}$ = _____

10. $4\frac{3}{7}$ = _____

LEVEL F
FRACTIONS
Skill 3, 4

Name ______________________________
Date ______________________________

Give answers in lowest terms.

1. $\begin{array}{r} \frac{1}{3} \\ + \frac{4}{6} \\ \hline \end{array}$

2. $\begin{array}{r} \frac{1}{3} \\ - \frac{2}{7} \\ \hline \end{array}$

3. $\frac{3}{8} + \frac{1}{4} =$ ______

4. $\frac{3}{4} + \frac{1}{2} =$ ______

5. $\frac{4}{6} - \frac{1}{3} =$ ______

6. $\begin{array}{r} 12\frac{3}{5} \\ - 7\frac{3}{10} \\ \hline \end{array}$

7. $\begin{array}{r} 3\frac{7}{8} \\ 2\frac{1}{3} \\ + 1\frac{1}{2} \\ \hline \end{array}$

8. $\begin{array}{r} 9\frac{3}{4} \\ - 3\frac{5}{8} \\ \hline \end{array}$

9. $\begin{array}{r} 4\frac{3}{4} \\ - 3\frac{2}{5} \\ \hline \end{array}$

10. $\begin{array}{r} 7\frac{9}{11} \\ + 6 \\ \hline \end{array}$

LEVEL F
FRACTIONS
Skill 7

Name ______________________________
Date ______________________________

Multiply or divide.

1. $7 \times \frac{1}{3} =$ ______

2. $\frac{1}{4} \times 8 =$ ______

3. $8 \div$ ______ $= 2$

4. $2 \times \frac{3}{5} =$ ______

5. $\frac{7}{8} \times 5 =$ ______

LEVEL F

FRACTIONS

Skill 5, 6

Name ________________________

Date ________________________

Put >, < , or = in each ○.

1. 8/6 - 1/3 ○ 7/10 + 2/5

2. 1/6 x 2 ○ 2 1/2 + 2/3

3. 2 1/4 + 3/4 ○ 4/6 - 7/12

4. 6/8 - 3/4 ○ 2/3 + 3/12

5. 5/12 - 1/3 ○ 6/12 x 1/6

Put these fractions in order from smallest to largest.

1. 9/2, 1/9, 3/6, 4/5 ________________________________

2. 9/8, 7/3, 9/4, 15/12 ________________________________

3. 3 1/4, 7/4, 2 1/8, 1 7/8 ________________________________

4. 2/12, 3/6, 2/3, 5/8 ________________________________

5. 4/6, 3 1/8, 2/4, 6/8 ________________________________

LEVEL F

FRACTIONS

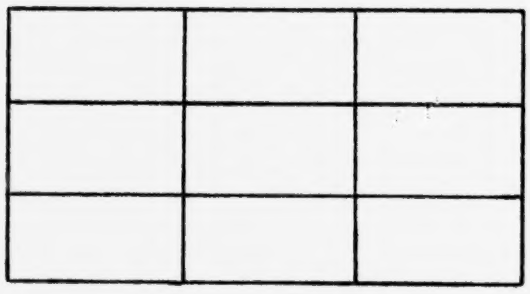
Skill 8

Name ______________________

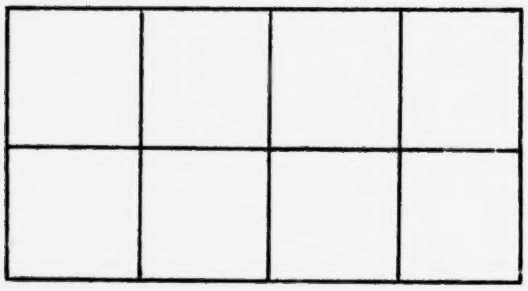
Date ______________________

Shade the region represented by the problem and write the answer.

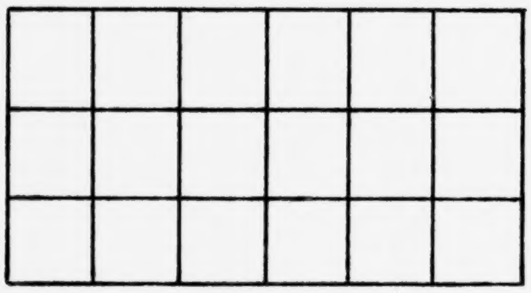
1. 1/3 x 2/3 = ______



2. 2/4 x 1/2 = ______

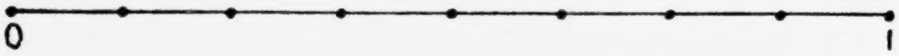


3. 2/6 x 2/3 = ______

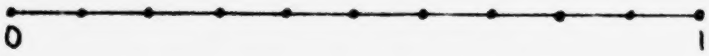


Indicate your answer on the line and number line.

4. 1/4 x 1/2 = ______



5. 1/2 x 1/5 = ________



LEVEL F

FRACTIONS

Skill 9

Name ______________________________

Date ______________________________

Solve and label.

1. In a school track meet Ed jumped 6 1/4 feet, Howard jumped 5 1/3 feet and Bill jumped 7 1/6 feet. How many feet did the three jump together?

   ____

2. Connie caught a sailfish that weighed 67 1/2 pounds and a hammerhead shark that weighed 105 3/4 pounds. What was the difference between the weights of the two fish?

   ____

3. Close to sea level, air presses on each square inch of your body with a force of 14 7/10 pounds. What would be the pressure on the back of your right hand if it measures approximately 12 square inches?

   ____

4. If a car races 18 laps around a 1/4 mile track, how many miles long is the race?

   ____

5. If Sybil can make an apron from 3/4 of a yard of material, how many aprons can she make from 9 yards of material?

   ____

LEVEL F Name ______________________

DECIMALS Date ______________________

Skill 1, 2, 3, 4

1. Write the compact number for five thousand, three hundred twenty-four and ninety-six hundredths.

____

2. Write 698.7 in words. ______________________________

____.

3. Write the decimal equivalent for the following fractions.

a. $\frac{14}{100}$ ______________________

b. $\frac{25}{100}$ ______________________

c. $\frac{3}{10}$ ______________________

4. Write the equivalent fraction for each of the following decimals.

a. .60 ______________________________

b. .75 ______________________________

c. .3 ______________________________

5. Arrange the following numbers in order from the smallest to largest.

a. 4.6, 9.58, 8.02, .95, .65, 9.7 ______________________

____

b. .54, 54.5, .5, 54.57, 5.4 ______________________

____

LEVEL F

DECIMALS

Skill 5

Name ______________________

Date ______________________

Add or subtract.

1. 126.08
+ 23.9

2. 14.28
+ 691.31

3. 453.82
- 51.2

4. 28.32
+465.9

5. 7642.80
- 899.99

LEVEL F

DECIMALS

Skill 6

Name ______________________

Date ______________________

Find the product.

1. .83
x 4

2. 1.94
x 5

3. 6.73
x 3

4. 5.32
x 9

5. 17.86
x 7

LEVEL F
Name ______________________________

DECIMALS
Date ______________________________

Skill 7, 8

Solve and label.

1. Nena has $9.65. She will buy 6 yo-yos at $1.25 each. How much money will she have left?

____

2. A baseball glove costs $4.98. Two baseballs cost $2.48. John bought three gloves and one baseball. How much did he spend?

____

3. A Boy Scout troop needed $7.38 for transportation to a summer camp and $8.46 for entrance fee. There are 9 boys in the troop. How much money will each boy have to bring?

____

4. When Betty started on her trip to Tennessee, the mileage on her car read 36,288.9. When she returned, it read 38,035.3. How far did she travel?

____

5. The previous Daytona Speedway record was 190.71 miles per hour. During qualifying this year, Buddy's car went 191.64 miles per hour. What was the difference between the old and the new record?

____

LEVEL F

Name ____________________

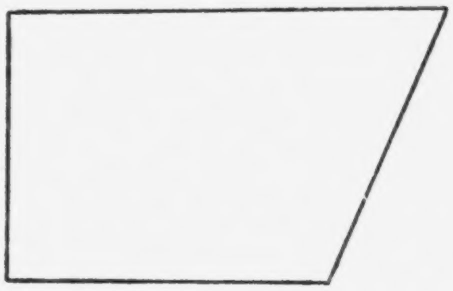
GEOMETRY

Date ____________________

Skill 1

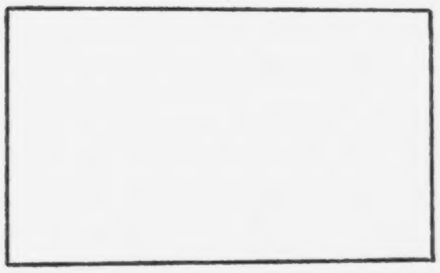
Find the perimeter, to the nearest 1/4 inch, of the following polygons.

1.



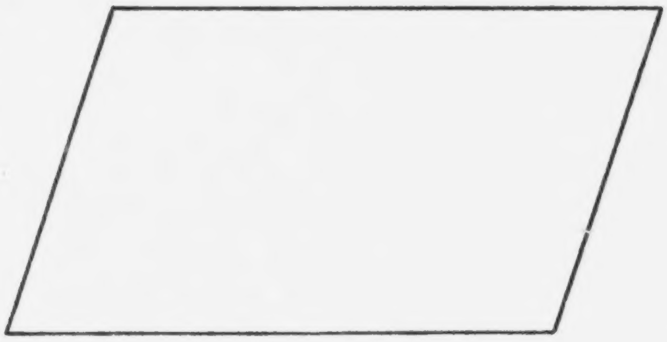
1. ____________

2.



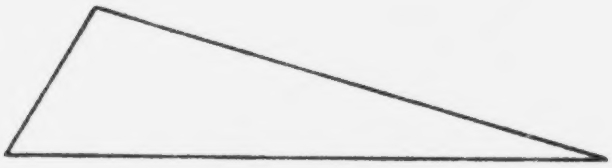
2. ____________

3.



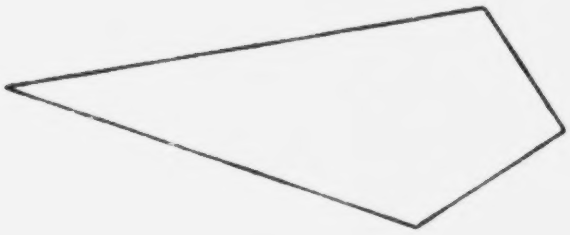
3. ____________

4.



4. ____________

5.



5. ____________

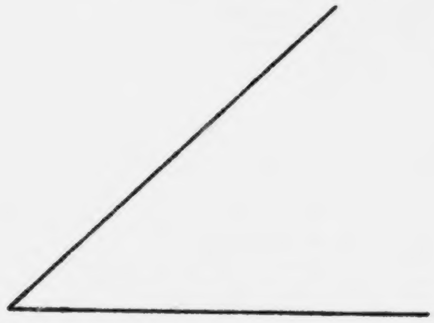
LEVEL F Name ________________________

GEOMETRY Date ________________________

Skill 2 (Page 1 of 2 pages)

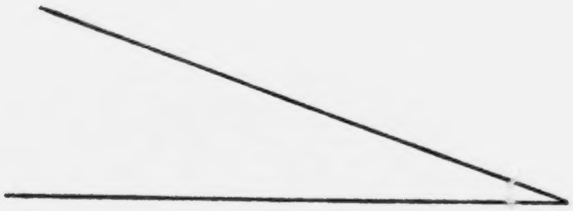
Measure the following angles using a protractor.

1.



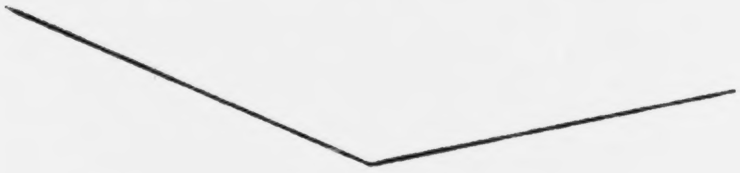
1. ________________

2.



2. ________________

3.



3. ________________

Draw the following angles.

4. 45°

5. 106°

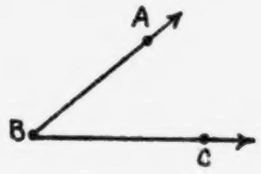
LEVEL F   Name ____________________

GEOMETRY   Date ____________________

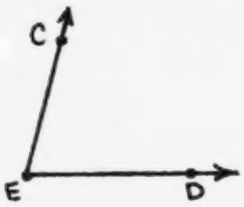
Skill 2 (Page 2 of 2 pages)

Construct angles congruent to each given angle.

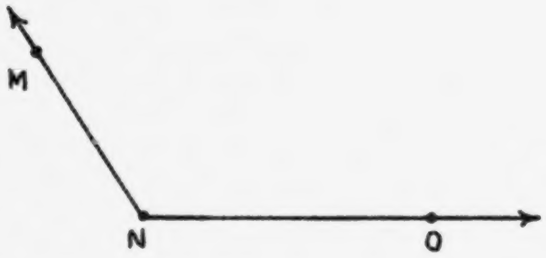
6.



7.

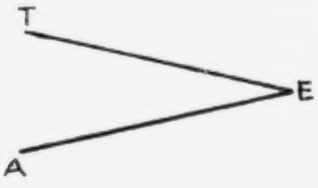


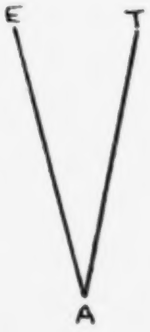
8.



Answer True or False.

9.

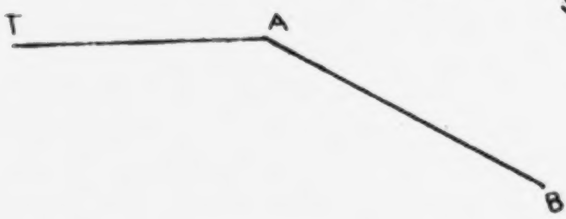


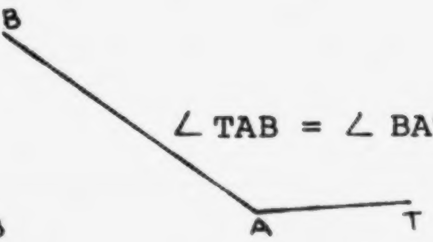


$\angle$ TEA = $\angle$ EAT

9. __________

10.





$\angle$ TAB = $\angle$ BAT

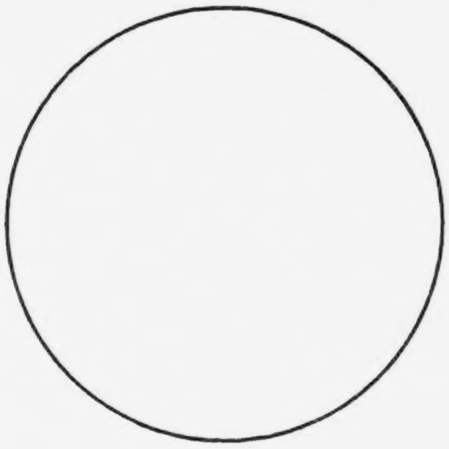
10. ________

LEVEL F Name ____________________

GEOMETRY Date ____________________

Skill 5

Use the figure to show your answers.



1. Locate point 0 as the center.

2. Draw a diameter, label it A B.

3. Draw a chord, which is not a diameter, label it C D.

4. What is the arc formed by the chord? ____________________

5. Name the radius. ____________________

LEVEL F

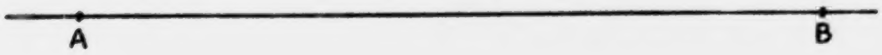
GEOMETRY

Skill 6

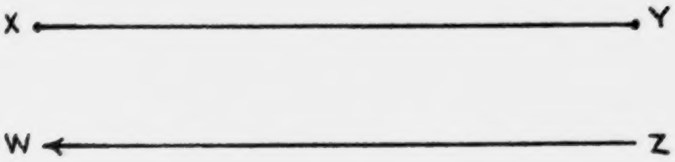
Name ____________________

Date ____________________

1. Use your compass to bisect line segment A B.



2. Draw a perpendicular line segment to line X Y.



3. If you extend your line segment to intersect W Z, which is parallel to X Y, will X Y be perpendicular to W Z?

3. ____________________

4. Draw $\overleftrightarrow{AB}$ parallel to $\overleftrightarrow{CD}$.

5. Use $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ to construct a rectangle.

LEVEL F

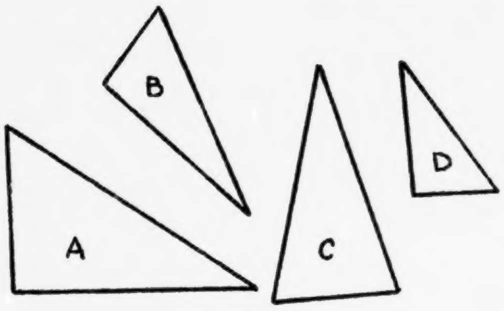
GEOMETRY

Skill 7

Name ______________________________

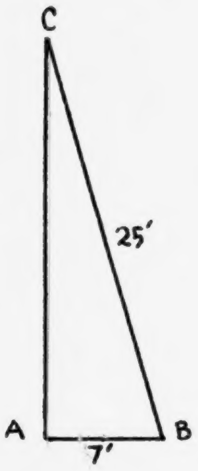
Date ______________________________

1. Name the triangles that appear to be similar.

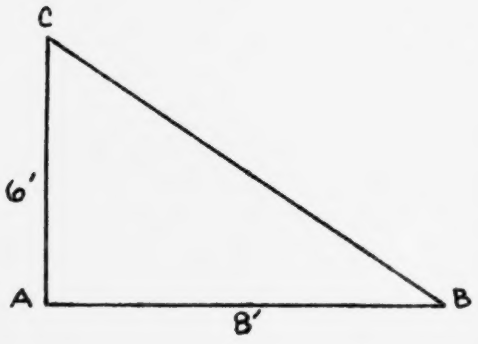


____

2. Construct and label a similar and a congruent triangle.



(a) __________ (b) __________



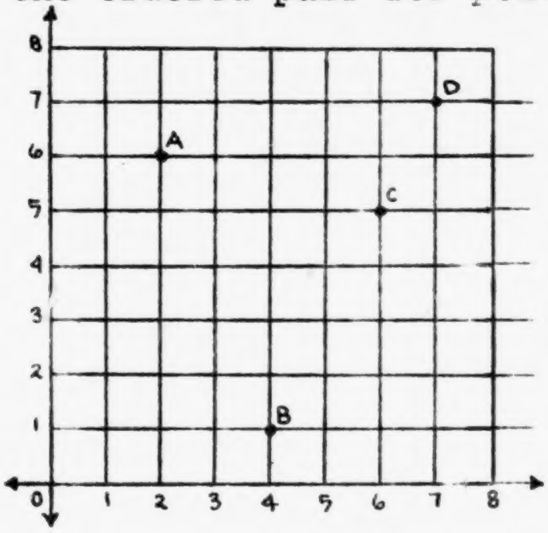
(c) __________ (d) __________

LEVEL F
Name ____________________

GEOMETRY
Date ____________________

Skill 8, 9

1. Give the ordered pair for points A, B, C, D.



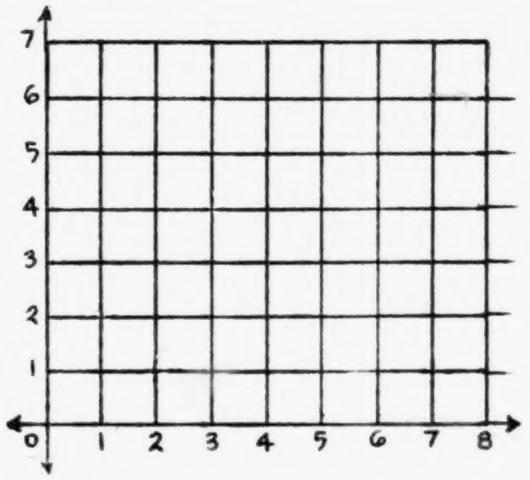
A = ________

B = ________

C = ________

D = ________

2. Graph the following pair of coordinates. Label points.



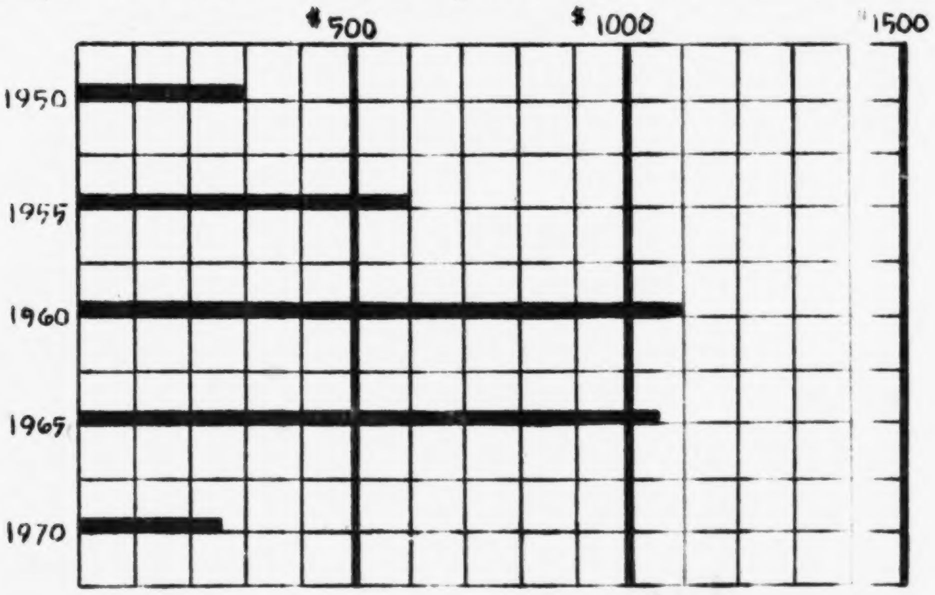
A = 3,4

B = 7,1

C = 1,2

D = 2,1

3. Graph of the interest paid Mr. Williamson on his savings account.



In what year did he draw the most interest?

____

In what year did he draw the least? ____

LEVEL F Name ____________________

GEOMETRY Date ____________________

Skill 10

Solve and label.

1. At $14.00 a ton, what is the cost of a load of coal weighing 4000 pounds?

2. The perimeter of a triangle is 364 1/2 feet. One side is 102 1/2 and the second side is 89 1/2 feet. What is the length of the third side?

3. What is the distance around a room that is 20 feet long and 14 feet wide?

4. How many yards of fencing will be needed for a rectangular yard 150 feet long and 60 feet wide?

5. Nell spent her vacation at a mountain resort. Her hotel was 1 3/4 miles from the top of the mountain. How many feet was this?

LEVEL F
GEOMETRY
Skill 11, 12

Name _______________________________
Date _______________________________

Table:

1 millimeter = 1/1000
1 centimeter = 1/100
1 decimeter = 1/10
1 decameter = 10 meters
1 hectometer = 100 meters
1 kilometer = 1000 meters

1. 6 cm = _____ mm

2. 70 dm = _____ m

3. 40 mm = _____ cm

4. 4 Km = _____ hm

5. 800 dkm = _____ km

Table:

1 cm = 0.39 in.
1 in. = 2.54 cm
1 meter = 39.37 in.
1 yard = 0.91 m
1 mile = 1.61 km

1. 5 cm = _____ in.

2. 7 mi. = _____ km

3. 15 in. = _____ cm

4. 8 yd. = _____ m

5. 5 m = _____ in.

LEVEL F Name ________________________

TIME Date ________________________

Skill 1

Write the time in the blanks.

1. 7 hours, 15 minutes later than 10:00 A.M. is ________________.

2. 5 hours, 45 minutes earlier than 2:00 P.M. is ________________.

3. A fire company answered an alarm at 3:07 P.M. They fought the fire for ten hours before it was out. What time was it finally put out?

____

4. Jan's plane was due to land at 11:00 A.M. The plane was 3 1/2 hours late. What time did the plane land?

____

5. It takes Mr. Brown 8 hours to drive to Atlanta. If he left at 9:00 A.M., what time would he arrive?

____

LEVEL F

TIME

Skill 2

Name ____________________

Date ____________________

Complete each statement.

1. Two and a half decades is the same as ______________ years.

2. "Four score and 7 years" is a familiar phrase. How many years does this represent? ______________

3. Eighty-four days equals __________ fortnights.

4. Nineteen hundred seventy-one equals ____ centuries, _____ score , _____ decades, _____ years.

5. Leap year has _______ days.

LEVEL F Name ______________________________

TIME Date ______________________________

Skill 3

Next to each time from a 24-hour clock, write the equivalent 12-hour clock time using A.M. or P.M.

Time - 24-hour clock	Time - 12-hour clock
1. 07:17	1. ______________________
2. 16:00	2. ______________________
3. 01:30	3. ______________________
4. 13:30	4. ______________________
5. 15:45	5. ______________________

LEVEL F

TIME

Skill 4, 5

Name ________________________

Date ________________________

Solve the problems. Label your answers A.M. or P.M.

1. A plane leaves New York (EST) 5:00 P.M. It arrives in Los Angeles (PST) when the plane arrives?

1. _______________

2. John's family left Washington, D.C. (EST) at 7:00 A.M. They drove into Chicago (CST) 12 hours later. What time was it in Chicago when they arrived?

2. _______________

3. A plane leaves California (PST) at 4:00 P.M. It arrives in Miami 6 1/2 hours later. What time is it in Miami (EST) when the plane arrives?

3. _______________

4. In the summer Massachusetts is on daylight savings time and Georgia is on EST. A three and a half hour flight leaving Atlanta at 10:00 P.M. would arrive in Boston at what time?

4. _______________

5. Suppose Connecticut operates on daylight savings time during the summer months and New Jersey does not. If Mr. Smith left Hartford, Conn. at 3:00 P.M. and arrived three hours later in Trenton, N.J., what time did he arrive?

5. _______________

LEVEL F

SPECIAL TOPICS

Skill 1

Name ____________________

Date ____________________

1. With one flip of a coin, the probability that heads will be up is ___________.

2. In one roll of a die, the probability of a four showing up is ________.

3. Complete the chart.

Total number of buttons	8	11	6
red buttons	2	3	1
green buttons	2	2	2
blue buttons	4	6	3
P (red)			
P (green)			
P (blue)			
P (red or green)			
P (orange)			

4. For A = { △△○○○□□□□} what is:

P (□) = _____

P (△ or ○ or □) + _____

P (☆) = _____

LEVEL F

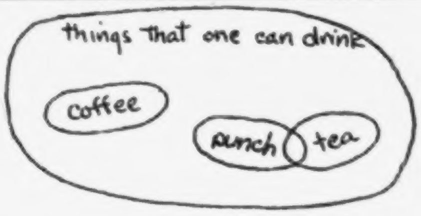
SPECIAL TOPICS

Skill 2, 3

Name ______________________

Date ______________________

1. If no odd numbers are evenly divisible by 2, are there some odd numbers divisible by 2? ______

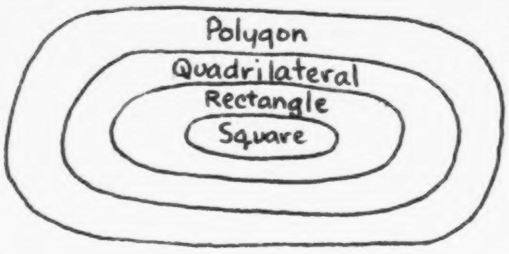

things that one can drink
coffee
punch
tea

Use the above diagram to label each statement is true or false.

2. If you can drink it, then it is tea. ________

3. If it is tea, then you can drink it. ________

4. If it is punch or tea, then you can drink it. ________


Polygon
Quadrilateral
Rectangle
Square

Use the above diagram to label each statement true or false.

5. A square is a polygon. __________

6. A square is a quadrilateral. __________

7. A polygon is a rectangle. __________

8. A rectangle is a quadrilateral. __________

9. A quadrilateral is a square. ________

10. A quadrilateral is a polygon. __________

LEVEL F　　Name ____________

NUMERATION　　Date ____________

Skill 1

Round to the nearest 100.

1. 444 400　　2. 1679 1700　　3. 1,111,111 1,111,100

Round to the nearest 1000.

4. 400 0　　5. 5,555 6,000　　6. 1,768,982 1,769,000

Round to the nearest 100,000.

7. 478,562 500,000　　8. 987,654,320 987,700,000

9. 768,032,999 768,000,000　　10. 85,743,279 85,700,000

LEVEL F　　Name ____________

NUMERATION　　Date ____________

Skill 9

Fill in the blanks.

1. 1,4,9,16,25,36,49,64,81,100,121

2. 1,2,2,3,3,3,4,4,4,4,5,5,5,5,5

3. 2,5,11,23,47,95,191

4. 17,13,18,14,19,15,20,16,21

5. 4,16,64,256,1024

NUMERATION   Date ____________________

Skill 2, 3

Write the number words for these numerals.

1. 34,135,675   1. thirty-four million, one hundred thirty-five thousand, six hundred seventy-five

2. 89,406,525   2. eighty-nine million, four hundred six thousand, five hundred twenty-five

3. 246,987,503   3. two hundred forty-six million, nine hundred eighty-seven thousand, five hundred three

Write the compact numeral for these number words.

4. Five hundred thousand, five hundred fifty   4. 500,550

5. Thirty-three thousand, three hundred sixty-eight.   5. 33,368

Write the place value of the underlined digit.

6. 55,555,555 ten thousands   7. 123,456,789 ones

8. 101,010,101 ten millions   9. 89,643,205 hundred thousands

10. 987,654,321 hundred millions

LEVEL F

NUMERATION

Skill 4, 5

Name ______________________

Date ______________________

Write these products using a base and exponent.

1. $10 \times 10 \times 10 \times 10 =$ 1. 10^4

2. $10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 =$ 2. 10^8

Write the products.

3. $10^6 =$ 3. 1,000,000

4. $10^9 =$ 4. 1,000,000,000

5. $10^7 =$ 5. 10,000,000

In the following, underline the base and draw a circle around its exponent.

6. $10 \times \underline{10}^{⑥}$

7. $7 \times \underline{10}^{④}$

Write these numbers in expanded form using exponential notation.

8. $90 =$ 8. 9×10^1

9. $60{,}000 =$ 9. 6×10^4

10. $7{,}000{,}000 =$ 10. 7×10^6

LEVEL F

NUMERATION

Skill 6, 7

Name ____________________

Date ____________________

List the factors of each number and the greatest common factor for each pair of numbers.

1. 8 1, 2, 4, 8
   12 1, 2, 3, 4, 6, 12
   GCF 4

2. 70 1, 2, 5, 7, 10, 14, 35, 70
   35 1, 5, 7, 35
   GCF 35

3. 9 1, 3, 9
   24 1, 2, 3, 4, 6, 8, 12, 2
   GCF 3

List the next five multiples for each number and the least common multiple for each pair of numbers.

4. 4 8, 12, 16, 20, 24
   5 10, 15, 20, 25, 30
   LCM 20

5. 12 24, 36, 48, 60, 72
   10 20, 30, 40, 50, 60
   LCM 60

LEVEL F
NUMERATION
Skill 8

Name ______________________
Date ______________________

Write the prime factors of the following numbers.

1. 37	1. 37 x 1
2. 9	2. 3 x 3
3. 79	3. 79 x 1
4. 85	4. 17 x 5

5. Which of the above numbers are prime? 37 and 79

LEVEL F
NUMERATION
Skill 10

Name ______________________
Date ______________________

Use the divisibility rule for 2,3,4,5,6,9, and 10 of the following numbers.

1. 60 2, 3, 4, 5, 6, 10
2. 135 3, 5, 9
3. 4321 none
4. 246,420 2, 3, 4, 5, 6, 9, 10

5. What is the rule for testing a number for divisibility by 3?
The sum of the digits is a multiple of three.

LEVEL F   Name ______________________

NUMERATION   Date ______________________

Skill 11, 12

Name a set that could be the universe for:

1. M = {apple, peach, pear, plum} one possible answer is fruit

2. B = {New Zealand, Australia, Puerto Rico} islands or island countries

set A = {all dog breeds}

set B = {all dog breeds in America}

set C = {beagle, shepherd, chihuahua}

set D = {beagle, basset hound, bird dog}

set E = {Siamese cats}

set F = {shepherd, beagle, chihuahua}

Use the above information to decide if the following relations are true or false.

3. set A is a subset of B false

4. set B is a subset of A true

5. set C is a subset of B true

6. set C and D are equivalent sets true

7. set C and F are equal sets true

8. set E is a subset of A false

9. set E is disjoint true

10. set C and D intersect true

LEVEL F
Name ______________________

ADDITION AND SUBTRACTION
Date ______________________

Skill 1

Add.

1.
17,865
25,947
23,102
66,914

2.
48,751
1,934
27,254
77,939

Subtract.

3.
25,209
16,472
8,737

4.
19,275
10,986
8,289

5.
15,000
13,401
1,599

LEVEL F
Name ______________________

ADDITION AND SUBTRACTION
Date ______________________

Skill 2

Solve and label your answers.

1. Mr. Green's speedometer registered 7492 miles when he started on a trip to Tallahassee and 8234 miles when he returned. How many miles did he travel?

742 miles

2. Ron plays quarterback for the Panthers. During the season, he carried the ball for 176 yards in one game, 135 yards in another and 162 in the last game. What was the total yardage Ron carried the ball?

473 yards

3. Mr. White raised 2092 bushels of apples in his orchard this year. Last year he raised 1737 bushels. How many more bushels did he raise this year than last year?

355 more bushels

4. The Pacific Ocean has an average depth of 14,048 feet and the Atlantic Ocean has an average depth of 12,880. How much deeper is the average depth of the Pacific Ocean than the Atlantic?

1168 feet

5. If 25,426 children under twelve, 14,539 children over twelve and 21,987 adults visited Disneyland in one day, what was the total number of people there that day?

61,952 people

LEVEL F

MULTIPLICATION AND DIVISION

Name ____________________

Date ____________________

Skill 1

By using the commutative, associative or distributive properties, simplify the following:

1. 18 x 8 = (10 x 8) + (8 x 8)

2. 27 x 40 = 27 x (4 x 10) = (27 x 4) x 10

3. Use associative property to simplify.

   (3 x 4) x 5 = 3 x (4 x 5)

   Use distributive property to simplify.

4. (12 x 8) + (13 x 8) = (12 + 13) x 8

5. (54 ÷ 9) + (27 ÷ 9) = (54 + 27) ÷ 9

LEVEL F

MULTIPLICATION AND DIVISION

Name ____________________

Date ____________________

Skill 2, 4

Multiply.

1.
27
14
108
270
378

2.
144
26
864
880
3744

3.
57642
79
518,778
4034,940
4,553,718

Divide.

Write remainder as whole number.

4.
2080 R.2
7) 14562
14000
562
560
2

Write remainder as fraction.

5.
4330 R.6
9) 38976
36000
2976
2700
276
270
6

LEVEL F — Name ______

MULTIPLICATION AND DIVISION — Date ______

Skill 3

1. $\begin{array}{r} 12 \\ \times\ 12 \\ \hline 144 \end{array}$

2. $\begin{array}{r} 11 \\ \times\ 8 \\ \hline 88 \end{array}$

3. $\begin{array}{r} 11 \\ 11\overline{)\,121} \end{array}$

4. $\begin{array}{r} 8 \\ 12\overline{)\,96} \end{array}$

5. A farmer's wife collected 72 eggs. How many dozen eggs were collected?

6 dozen

LEVEL F — Name ______

MULTIPLICATION AND DIVISION — Date ______

Skill 10

Write each product using exponents.

1. 3 x 3 x 3 x 3 = — 1. 3^4

2. 7 x 7 = — 2. 7^2

3. 4 x 4 x 4 x 4 x 4 = — 3. 4^5

4. 8 x 8 x 8 = — 4. 8^3

5. 9 x 9 x 9 x 9 x 9 x 9 x 9 = — 5. 9^7

LEVEL F

MULTIPLICATION AND DIVISION

Skill 5, 6

Name ______________________

Date ______________________

Round the divisor to nearest ten, dividend to nearest hundred. Estimate the answer.

1. 476 ÷ 23 $500 \div 20 = 25$

2. 322 ÷ 45 $300 \div 50 = 6$

3. 962 ÷ 97 $1000 \div 100 = 10$

4. 178 ÷ 39 $200 \div 40 = 5$

5. 647 ÷ 71 $600 \div 70 = 8$

Divide by standard algorithm; write answer in fractional form.

6. $20\frac{16}{23}$
23) 476
460
16

7. $7\frac{7}{45}$
45) 322
315
7

8. $9\frac{89}{97}$
97) 962
873
89

9. $4\frac{22}{39}$
39) 178
156
22

10. $9\, 8/71$
71) 647
639
8

LEVEL F

MULTIPLICATION AND DIVISION

Skill 7

Name ______________________

Date ______________________

Write each problem in two other division forms.

1. $\frac{35}{5}$ $35 \div 5$ $5\overline{)35}$
2. $\frac{76}{7}$ $76 \div 7$ $7\overline{)76}$
3. $\frac{178}{93}$ $178 \div 93$ $93\overline{)178}$
4. $\frac{1432}{7}$ $1432 \div 7$ $7\overline{)1432}$
5. $\frac{9382}{27}$ $9382 \div 27$ $27\overline{)9382}$

LEVEL F

MULTIPLICATION AND DIVISION

Skill 8

Name ______________________

Date ______________________

set A = {banana, cherry, strawberry}

set B = {vanilla, chocolate, peach}

set C = $A \otimes B$

1. Write the members of set A x B

{banana, vanilla; banana, chocolate; banana, peach;
cherry, vanilla; cherry, chocolate; cherry, peach;
strawberry, vanilla; strawberry, chocolate; strawberry, peach}

Write T or F to show whether statements about the above sets are true or false.

2. n(A) x n(B) = n (AxB) T

3. n(A) + n(B) = n(AxB) F

4. n(AxB) = n(A+B) F

5. n(AxB) = n (C) T

LEVEL F

MULTIPLICATION AND DIVISION

Skill 9

Name ______________________________

Date ______________________________

Name the average, range, and median for the data.

	Average	Range	Median
1. 68, 38, 97, 56, 71	66	59	68
2. 36, 45, 23, 17, 44	33	28	35
3. 1500, 50, 90, 80, 150	374	1450	90

4. Frank played golf on Monday, Wednesday, and Thursday. He shot a 78, 86 and 67. What was his average for the three days?

77

5. Matt averaged 126 catches in 9 innings. What was his average number of catches per inning in the game?

14 catches

LEVEL F

MULTIPLICATION AND DIVISION

Skill 11

Name ______________________

Date ______________________

Solve and label.

1. One day when Jane and Ned went to Niagara Falls, 1320 people rode across the Whirlpool on the cableway. Thirty people went in the cablecar each trip. How many trips did the cablecar make that day?

   44 trips

2. A jet plane traveling 1360 miles per hour is going very fast. The Wright brothers' plane flew about 34 miles per hour. How much faster is the jet than the Wright brothers' plane?

   40 times faster

3. Jan drove 432 miles to Atlanta. Twenty-four gallons of gasoline were used. What was the average number of miles traveled per gallon?

   18 miles per gallon

4. Mr. Weeks bought 25 crates of grapefruit and 40 crates of oranges. If each crate weighed 30 pounds, how much did they weigh together?

   1950 pounds

5. Each school has 18 classrooms. Each classroom has 32 students. How many students in 44 schools?

   25,344 students

LEVEL F

FRACTIONS

Skill 1, 2

Name ______________

Date ______________

Complete the equation.

1. $\frac{2}{3} = \frac{a}{6}$ a = 4

2. $\frac{1}{2} = \frac{1 \times d}{2 \times e} = \frac{5}{10}$ $\frac{d}{e} = \frac{5}{5}$

3. $\frac{1}{3} \times \frac{b}{c} = \frac{3}{9}$ $\frac{b}{c} = \frac{3}{3}$

4. $\frac{3}{4} \times \frac{f}{g} = \frac{6}{8}$ $\frac{f}{g} = \frac{2}{2}$

List the next three equivalent fractions.

5. $\frac{3}{5} = \frac{6}{10}, \frac{9}{15}, \frac{12}{20}$

6. $\frac{7}{9} = \frac{14}{18}, \frac{21}{27}, \frac{28}{36}$

Change to mixed fractions. Put answer in lowest terms.

7. $\frac{9}{2} = 4\frac{1}{2}$

8. $\frac{16}{10} = 1\frac{3}{5}$

Change the mixed fractions to improper fractions.

9. $7\frac{3}{8} = \frac{59}{8}$

10. $4\frac{3}{7} = \frac{31}{7}$

LEVEL F

FRACTIONS

Skill 3, 4

Name ______________________

Date ______________________

Give answers in lowest terms.

1. $$\begin{array}{r} \frac{1}{3} \\ + \frac{4}{6} \\ \hline 1 \end{array}$$

2. $$\begin{array}{r} \frac{1}{3} \\ - \frac{2}{7} \\ \hline \frac{1}{21} \end{array}$$

3. $\frac{3}{8} + \frac{1}{4} = \underline{\frac{5}{8}}$

4. $\frac{3}{4} + \frac{1}{2} = \underline{1\frac{1}{4}}$

5. $\frac{4}{6} - \frac{1}{3} = \underline{\frac{1}{3}}$

6. $$\begin{array}{r} 12\,\frac{3}{5} \\ - 7\frac{3}{10} \\ \hline 5\,\frac{3}{10} \end{array}$$

7. $$\begin{array}{r} 3\,\frac{7}{8} \\ 2\,\frac{1}{3} \\ + 1\,\frac{1}{2} \\ \hline 7\frac{17}{24} \end{array}$$

8. $$\begin{array}{r} 9\,\frac{3}{4} \\ - 3\,\frac{5}{8} \\ \hline 6\frac{1}{8} \end{array}$$

9. $$\begin{array}{r} 4\,\frac{3}{4} \\ - 3\,\frac{2}{5} \\ \hline 1\,\frac{7}{10} \end{array}$$

10. $$\begin{array}{r} 7\,\frac{9}{11} \\ + 6 \\ \hline 13\,\frac{9}{11} \end{array}$$

LEVEL F

FRACTIONS

Skill 7

Name ______________________

Date ______________________

Multiply or divide.

1. $7 \times \frac{1}{3} = \underline{2\frac{1}{3}}$

2. $\frac{1}{4} \times 8 = \underline{2}$

3. $8 \div \underline{4} = 2$

4. $2 \times \frac{3}{5} = \underline{1\frac{1}{5}}$

5. $\frac{7}{8} \times 5 = \underline{4\frac{3}{8}}$

LEVEL F

FRACTIONS

Skill 5, 6

Name ____________________

Date ____________________

Put >, <, or = in each ○.

1. 8/6 - 1/3 (<) 7/10 + 2/5

2. 1/6 x 2 (<) 2 1/2 + 2/3

3. 2 1/4 + 3/4 (>) 4/6 - 7/12

4. 6/8 - 3/4 (<) 2/3 + 3/12

5. 5/12 - 1/3 (=) 6/12 x 1/6

Put these fractions in order from smallest to largest.

1. 9/2, 1/9, 3/6, 4/5 1/9, 3/6, 4/5, 9/2

2. 9/8, 7/3, 9/4, 15/12 9/8, 15/12, 9/4, 7/3

3. 3 1/4, 7/4, 2 1/8, 1 7/8 7/4, 1 7/8, 2 1/8, 3 1/4

4. 2/12, 3/6, 2/3, 5/8 2/12, 3/6, 5/8, 2/3

5. 4/6, 3 1/8, 2/4, 6/8 2/4, 4/6, 6/8, 3 1/8

LEVEL F

FRACTIONS

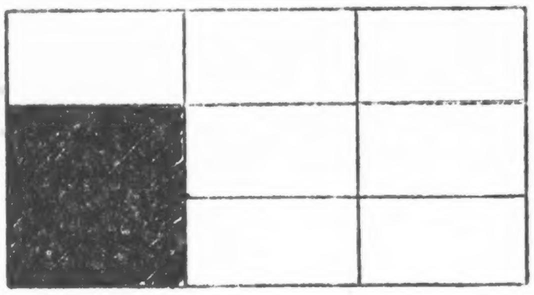
Skill 8

Name ______________________

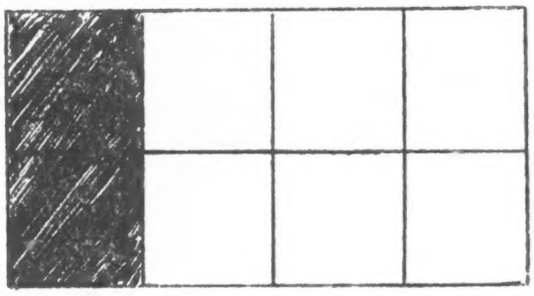
Date ______________________

Shade the region represented by the problem and write the answer.

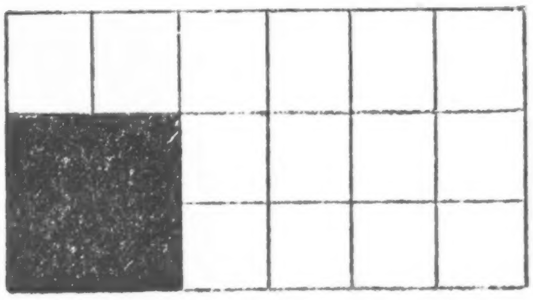
1. 1/3 x 2/3 = $\frac{2}{9}$



2. 2/4 x 1/2 = $\frac{2}{8}$

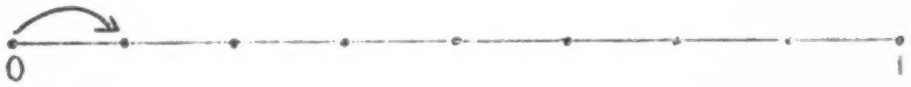


3. 2/6 x 2/3 = $\frac{4}{18}$



Indicate your answer on the line and number line.

4. 1/4 x 1/2 = $\frac{1}{8}$



5. 1/2 x 1/5 = $\frac{1}{10}$

LEVEL F

Name ____________________

FRACTIONS

Date ____________________

Skill 9

Solve and label.

1. In a school track meet Ed jumped 6 1/4 feet, Howard jumped 5 1/3 feet and Bill jumped 7 1/6 feet. How many feet did the three jump together?

$18\frac{3}{4}$ feet

2. Connie caught a sailfish that weighed 67 1/2 pounds and a hammerhead shark that weighed 105 3/4 pounds. What was the difference between the weights of the two fish?

$38\frac{1}{4}$ pounds

3. Close to sea level, air presses on each square inch of your body with a force of 14 7/10 pounds. What would be the pressure on the back of your right hand if it measures approximately 12 square inches?

$176\frac{2}{5}$ pounds

4. If a car races 18 laps around a 1/4 mile track, how many miles long is the race?

$4\frac{1}{2}$ miles

5. If Sybil can make an apron from 3/4 of a yard of material, how many aprons can she make from 9 yards of material?

12 aprons

LEVEL F Name ______________________

DECIMALS Date ______________________

Skill 1, 2, 3, 4

1. Write the compact number for five thousand, three hundred twenty-four and ninety-six hundredths.

5324.96

2. Write 698.7 in words. six hundred, ninety-eight and seven tenths.

3. Write the decimal equivalent for the following fractions.

a. $\frac{14}{100}$ fourteen hundredths

b. $\frac{25}{100}$ twenty-five hundredths

c. $\frac{3}{10}$ three tenths

4. Write the equivalent fraction for each of the following decimals.

a. .60 six tenths or sixty hundredths

b. .75 seventy-five hundredths

c. .3 three tenths

5. Arrange the following numbers in order from the smallest to largest.

a. 4.6, 9.58, 8.02, .95, .65, 9.7

.65, .95, 4.6, 8.02, 9.58, 9.7

b. .54, 54.5, .5, 54.57, 5.4

.5, .54, 5.4, 54.5, 54.57

LEVEL F

DECIMALS

Skill 5

Name ____________________

Date ____________________

Add or subtract.

1. 126.08
+ 23.9
149.98

2. 14.28
+ 691.31
705.59

3. 453.82
- 51.2
402.62

4. 28.32
+465.9
494.22

5. 7642.80
- 899.99
6742.81

LEVEL F

DECIMALS

Skill 6

Name ____________________

Date ____________________

Find the product.

1. .83
x 4
3.32

2. 1.94
x 5
9.70

3. 6.73
x 3
20.19

4. 5.32
x 9
47.88

5. 17.86
x 7
125.02

LEVEL F

DECIMALS

Skill 7, 8

Name ______________________

Date ______________________

Solve and label.

1. Nena has $9.65. She will buy 6 yo-yos at $1.25 each. How much money will she have left?

$2.15

2. A baseball glove costs $4.98. Two baseballs cost $2.48. John bought three gloves and one baseball. How much did he spend?

$16.18

3. A Boy Scout troop needed $7.38 for transportation to a summer camp and $8.46 for entrance fee. There are 9 boys in the troop. How much money will each boy have to bring?

$1.76

4. When Betty started on her trip to Tennessee, the mileage on her car read 36,288.9. When she returned, it read 38,035.3. How far did she travel?

1,746.4 miles

5. The previous Daytona Speedway record was 190.71 miles per hour. During qualifying this year, Buddy's car went 191.64 miles per hour. What was the difference between the old and the new record?

.93 miles per hour

LEVEL F

GEOMETRY

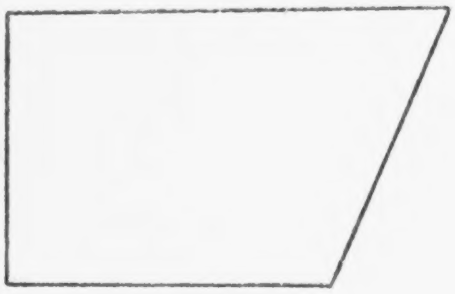
Skill 1

Name ______________________

Date ______________________

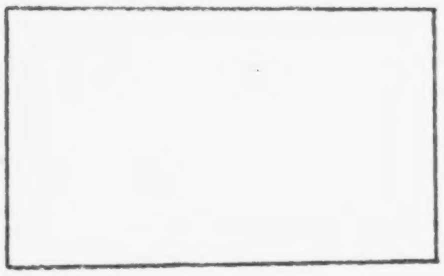
Find the perimeter, to the nearest 1/4 inch, of the following polygons.

1.



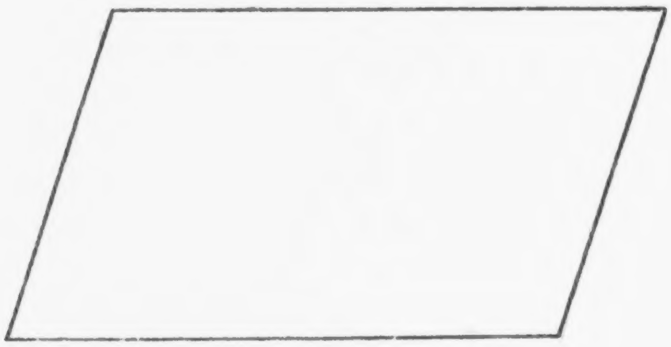
1. $6\frac{1}{4}$ inches

2.



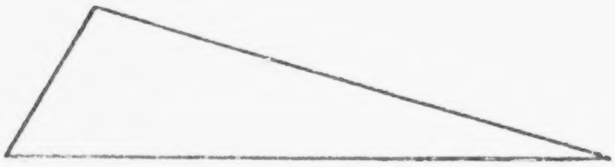
2. $6\frac{1}{2}$ inches

3.



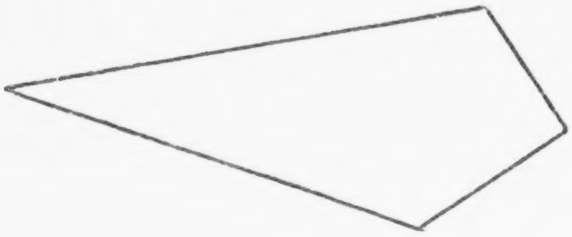
3. $8\frac{1}{2}$ inches

4.



4. 6 inches

5.



5. $5\frac{3}{4}$ inches

LEVEL F

GEOMETRY

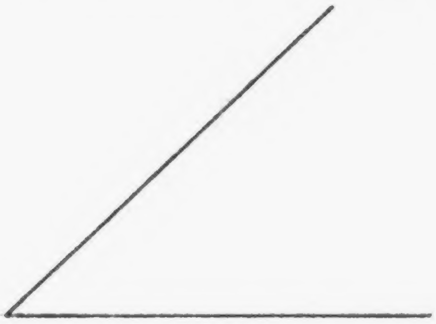
Skill 2 (Page 1 of 2 pages)

Name ______________________________

Date ______________________________

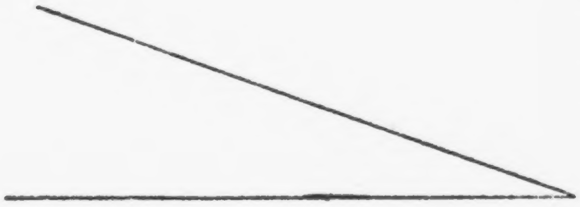
Measure the following angles using a protractor.

1.



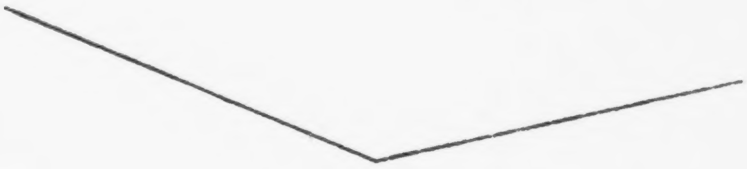
1. 43°

2.



2. 20°

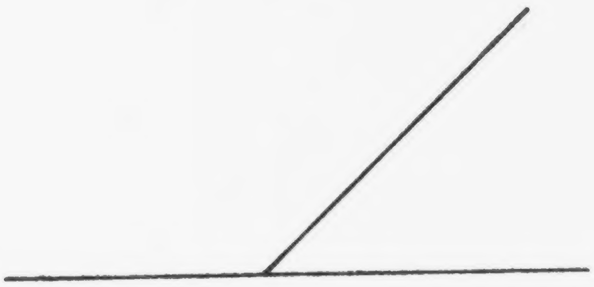
3.



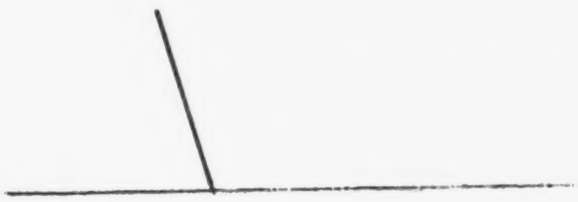
3. 145°

Draw the following angles.

4. 45°



5. 106°



LEVEL F

GEOMETRY

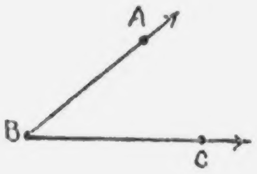
Skill 2 (Page 2 of 2 pages)

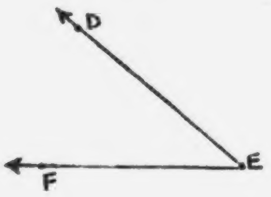
Name ____________________

Date ____________________

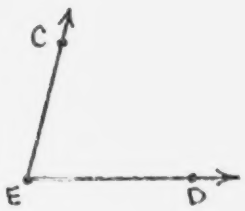
Construct angles congruent to each given angle.

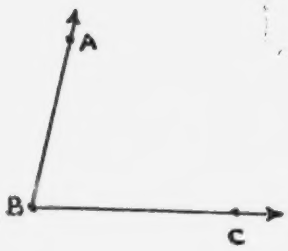
6.



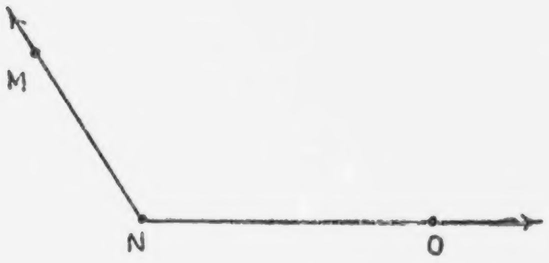


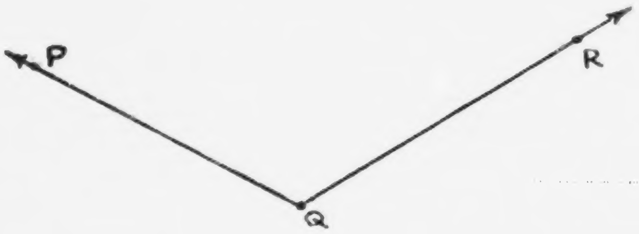
7.





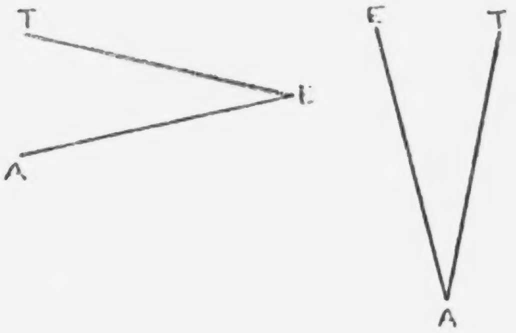
8.





Answer True or False.

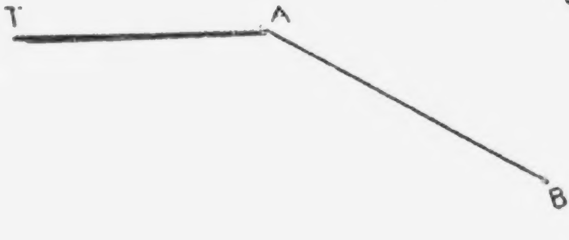
9.

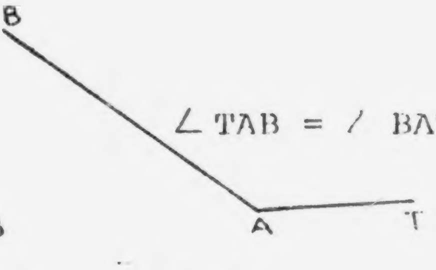


$\angle$ TEA = $\angle$ EAT

9. T

10.





$\angle$ TAB = $\angle$ BAT

10. F

LEVEL F

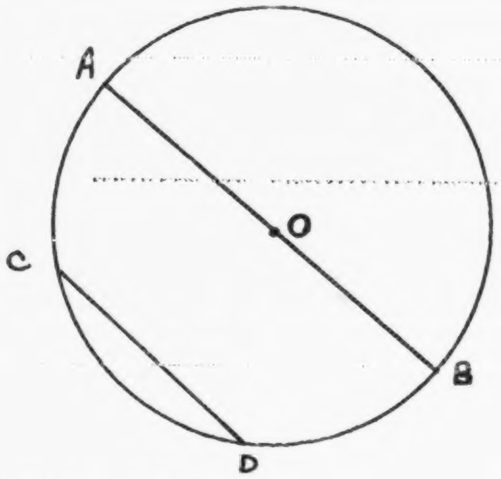
GEOMETRY

Skill 5

Name

Date

Use the figure to show your answers.



1. Locate point 0 as the center.

2. Draw a diameter, label it A B.

3. Draw a chord, which is not a diameter, label it C D.

4. What is the arc formed by the chord? $\overset{\frown}{CD}$

5. Name the radius. AO or BO

LEVEL F

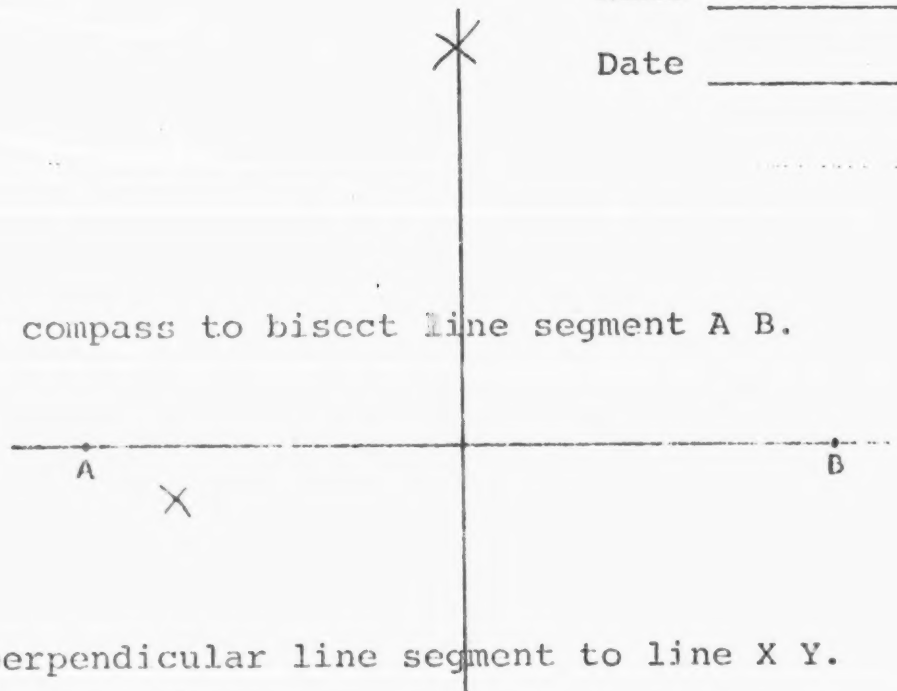
GEOMETRY

Skill 6

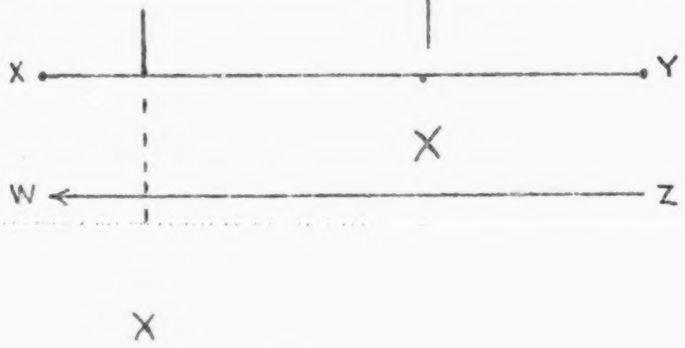
Name ______________________

Date ______________________

1. Use your compass to bisect line segment A B.



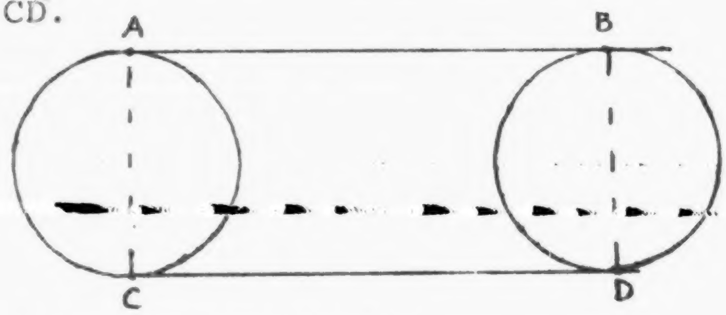
2. Draw a perpendicular line segment to line X Y.



3. If you extend your line segment to intersect W Z, which is parallel to X Y, will it be perpendicular to W Z?

3. yes

4. Draw $\overleftrightarrow{AB}$ parallel to $\overleftrightarrow{CD}$.



5. Use $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ to construct a rectangle.

indicated by dotted line in figure.",

LEVEL F

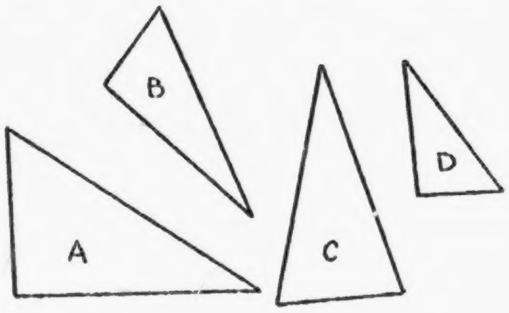
GEOMETRY

Skill 7

Name

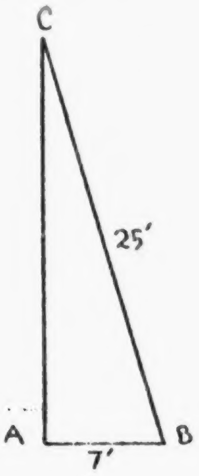
Date

1. Name the triangles that appear to be similar.

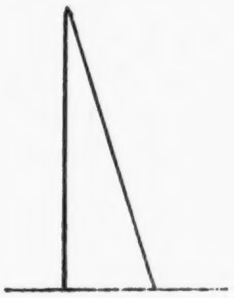


A and D

2. Construct and label a similar and a congruent triangle.

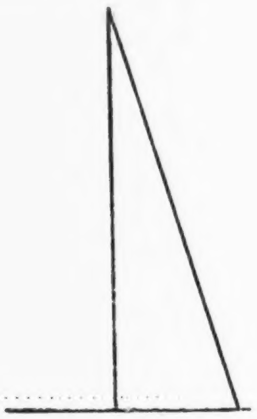


(a)

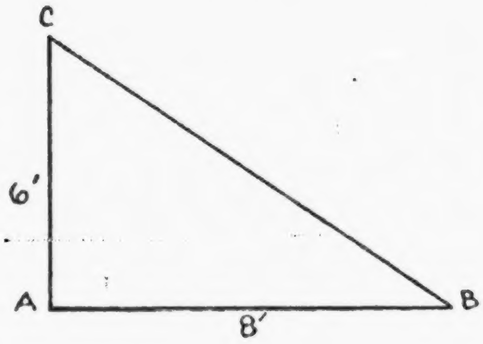


similar

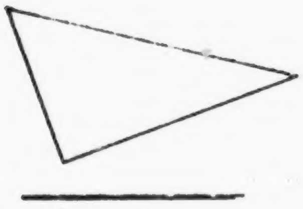
(b)



congruent

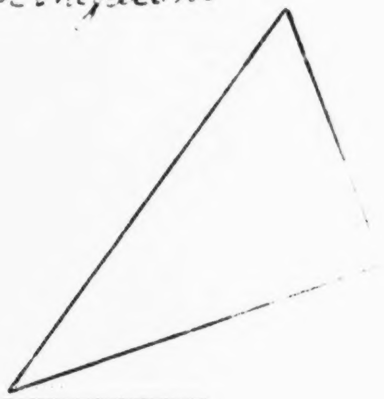


(c)



similar

(d)



congruent

LEVEL F

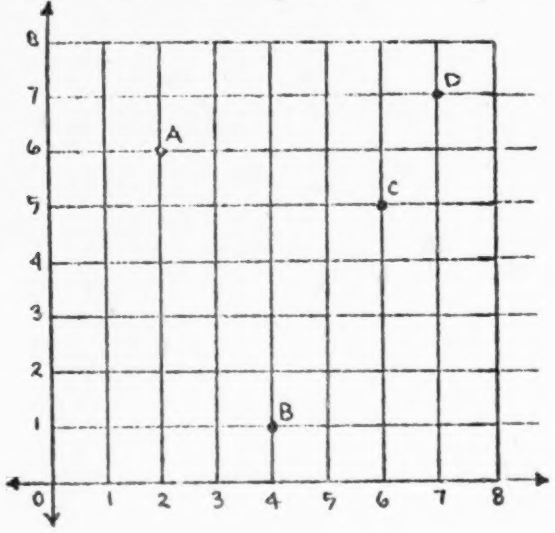
GEOMETRY

Skill 8, 9

Name ______________________

Date ______________________

1. Give the ordered pair for points A, B, C, D.



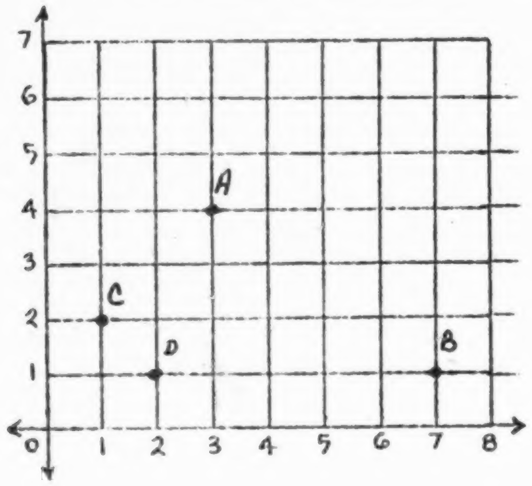
A = 2,6

B = 4,1

C = 6,5

D = 7,7

2. Graph the following pair of coordinates. Label points.



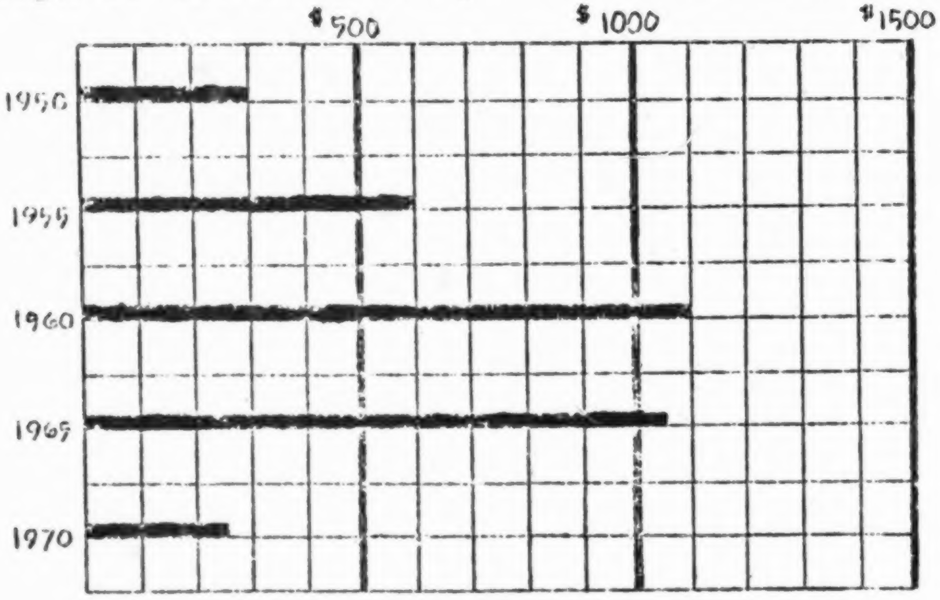
A = 3,4

B = 7,1

C = 1,2

D = 2,1

3. Graph of the interest paid Mr. Williamson on his savings account.



In what year did he draw the most interest?

1960

In what year did he draw the least? 1970

LEVEL F

GEOMETRY

Skill 10

Name ______________________________

Date ______________________________

Solve and label.

1. At $14.00 a ton, what is the cost of a load of coal weighing 4000 pounds?

$28.00

2. The perimeter of a triangle is 364 1/2 feet. One side is 102 1/2 and the second side is 89 1/2 feet. What is the length of the third side?

172 1/2 feet

3. What is the distance around a room that is 20 feet long and 14 feet wide?

140 yards

4. How many yards of fencing will be needed for a rectangular yard 150 feet long and 60 feet wide?

68 feet

5. Nell spent her vacation at a mountain resort. Her hotel was 1 3/4 miles from the top of the mountain. How many feet was this?

9240 feet

LEVEL F

GEOMETRY

Skill 11, 12

Name ______________________

Date ______________________

Table:

1 millimeter = 1/1000

1 centimeter = 1/100

1 decimeter = 1/10

1 decameter = 10 meters

1 hectometer = 100 meters

1 kilometer = 1000 meters

1. 6 cm = 60 mm

2. 70 dm = 7 m

3. 40 mm = 4 cm

4. 4 Km = 40 hm

5. 800 dkm = 8 km

Table:

1 cm = 0.39 in.

1 in. = 2.54 cm

1 meter = 39.37 in.

1 yard = 0.91 m

1 mile = 1.61 km

1. 5 cm = 1.95 in.

2. 7 mi. = 11.27 km

3. 15 in. = 38.10 cm

4. 8 yd. = 7.28 m

5. 5 m = 196.85 in.

LEVEL F Name ________________

TIME Date ________________

Skill 1

Write the time in the blanks.

1. 7 hours, 15 minutes later than 10:00 A.M. is 5:15 p.M. .

2. 5 hours, 45 minutes earlier than 2:00 P.M. is 8:15 a.M. .

3. A fire company answered an alarm at 3:07 P.M. They fought the fire for ten hours before it was out. What time was it finally put out?

1:07 a.M.

4. Jan's plane was due to land at 11:00 A.M. The plane was 3 1/2 hours late. What time did the plane land?

2:30 pM

5. It takes Mr. Brown 8 hours to drive to Atlanta. If he left at 9:00 A.M., what time would he arrive?

5:00 pM.

LEVEL F

TIME

Skill 2

Name ____________________

Date ____________________

Complete each statement.

1. Two and a half decades is the same as 25 years.

2. "Four score and 7 years" is a familiar phrase. How many years does this represent? 87

3. Eighty-four days equals 6 fortnights.

4. Nineteen hundred seventy-one equals 19 centuries, 3 score , 1 decades, 1 years.

5. Leap year has 366 days.

LEVEL F

TIME

Skill 3

Name ____________________

Date ____________________

Next to each time from a 24-hour clock, write the equivalent 12-hour clock time using A.M. or P.M.

Time - 24-hour clock	Time - 12-hour clock
1. 07:17	1. 7:17 a.m.
2. 16:00	2. 4:00 p.m.
3. 01:30	3. 1:30 a.m
4. 13:30	4. 1:30 p.m
5. 15:45	5. 3:45 p.m.

LEVEL F

TIME

Skill 4, 5

Name ______________________

Date ______________________

Solve the problems. Label your answers A.M. or P.M.

1. A plane leaves New York (EST) 5:00 P.M. It arrives in Los Angeles (PST) when the plane arrives?

1. 6 p.M. PST

2. John's family left Washington, D.C. (EST) at 7:00 A.M. They drove into Chicago (CST) 12 hours later. What time was it in Chicago when they arrived?

2. 6p.M. CST

3. A plane leaves California (PST) at 4:00 P.M. It arrives in Miami 6 1/2 hours later. What time is it in Miami (EST) when the plane arrives?

3. 9:30 p.M. EST

4. In the summer Massachusetts is on daylight savings time and Georgia is on EST. A three and a half hour flight leaving Atlanta at 10:00 P.M. would arrive in Boston at what time?

4. 12:30 a.M EDST

5. Suppose Connecticut operates on daylight savings time during the summer months and New Jersey does not. If Mr. Smith left Hartford, Conn. at 3:00 P.M. and arrived three hours later in Trenton, N.J., what time did he arrive?

5. 5:00 p.M EST

LEVEL F

SPECIAL TOPICS

Skill 1

Name ____________________

Date ____________________

1. With one flip of a coin, the probability that heads will be up is 1/2.

2. In one roll of a die, the probability of a four showing up is 1/6.

3. Complete the chart.

Total number of buttons	8	11	6
red buttons	2	3	1
green buttons	2	2	2
blue buttons	4	6	3
P (red)	2/8 or 1/4	3/11	1/6
P (green)	2/8 or 1/4	2/11	2/6 or 1/3
P (blue)	4/8 or 1/2	6/11	3/6 or 1/2
P (red or green)	4/8 or 1/2	5/11	3/6 or 1/2
P (orange)	0	0	0

4. For A = { △△○○○□□□□} what is:

P (□) = 4/9

P (△ or ○ or □) + 1 or 9/9

P (☆) = 0

LEVEL F

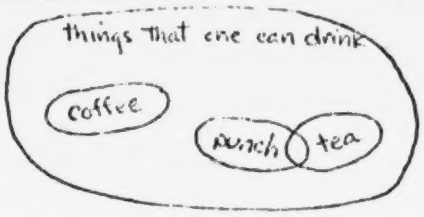
SPECIAL TOPICS

Skill 2, 3

Name ______________________

Date ______________________

1. If no odd numbers are evenly divisible by 2, are there some odd numbers divisible by 2? no

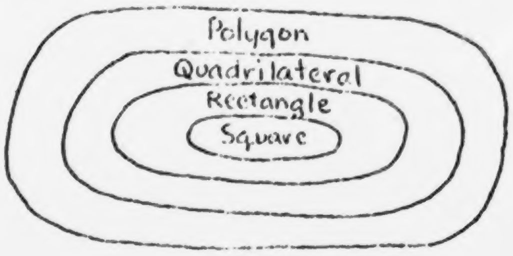

things that one can drink
coffee
punch
tea

Use the above diagram to label each statement is true or false.

2. If you can drink it, then it is tea. false

3. If it is tea, then you can drink it. true

4. If it is punch or tea, then you can drink it. true


Polygon
Quadrilateral
Rectangle
Square

Use the above diagram to label each statement true or false.

5. A square is a polygon. true

6. A square is a quadrilateral. true

7. A polygon is a rectangle. false

8. A rectangle is a quadrilateral. true

9. A quadrilateral is a square. false

10. A quadrilateral is a polygon. true

MATHEMATICS CONTINUUM

LEVEL G

BOOK 6

Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and continuum mastery tests should be used to provide sufficient evidence to check the 70-100% (mastery level) for each skill.

Metric and Non-Metric Geometry have been combined under the heading Geometry.

Money has not been keyed because it is interspersed with other topics.

The conversion tables are listed in the Strategy Manual.

LEVEL G

Review of Level F Skills

	NUMERATION	Example Numeration
1.	Uses the place value concept to write in words, numerals to the thousands, millions, and billions place and vice versa.	Write in digit form a numeral for the following number. a. forty-six billion, thirty-seven million. 46,037,000,000
2.	Identifies true, false, or open number sentences as related to sets.	Ring the open sentence. [✓ $n < 2$], $n-2 = 3$, $n+5 = 9$
3.	Identifies the set which contains all the solutions of the open sentence.	Name the solution set for the open sentence if the replacement set is: $A = \{1, 3, 5, 7, 9, 11\}$ $16 - n \geq 8$ $A = \{1, 3, 5, 7\}$
4.	Uses the divisibility rule for 8 and 9.	Circle the numbers that are divisable by 8 and place a rectangle around the numbers that are divisable by 9. 625, [✓ 264], $\boxed{189}$, [✓ 672], $\boxed{558}$
5.	Lists the factors of and gives the prime factorization of given whole numbers. Tests any number to determine whether it is prime or composite.	Find the factors of the numbers below. Draw a circle around the prime numbers. (a) 15 (b) [✓ 17] (c) 51 (d) [✓ 89] (a) 3×5 (c) 3×17 (b) 17×1 (d) 89×1
6.	Solves equations using clock arithmetic.	Solve the equation. $4+9 \overset{12}{=} b$ $b=1$

Textual Resources	Related Resources	Notes
Numeration		
HM Book 6, pp. 1-11, 16, 19, 20, 22, 166, 167	HM Visuals 6 (1. 2) HM Masters 6 (1, 2, 4, 37)	
1. HM Book 6, pp. 19, 28	H	
2. HM Book 6, pp. 12, 13		
3. HM Book 6, pp. 130-139, 330, 331	HM Visuals 6 (12) HM Masters 6 (31, 32)	
4. HM Book 6, pp. 182, 183	HM Masters 6 (40)	
5. HM Book 6, pp. 164, 165, 168-175, 177	HM Visuals 6 (14, 16) HM Masters 6 (38, 39)	
6. HM Book 6, pp. 188-192		

LEVEL G

Numeration

7. Compares clock arithmetic with the arithmetic of whole numbers.

8. Identifies which numbers can appear in other number bases and answers multiple choice questions about their characteristics.

9. Changes the numbers in the decimal base system to numbers in another base system and vice versa. Makes a place value chart to compare base ten with another base. Base raised only to 4th power.

10. Mixed Practice.

11. In-Depth.

Example

Numeration

List the solutions for the following equations.

$3 \times (4+3) = \underline{21}$

$3 \times (4+3) \overset{7}{=} \underline{0}$

Circle the numbers which can appear in base five.

[✓ 421] 35 [✓ 22] 731

Find the base five numeral which equals this base 10 numeral.

$74_{ten} = \underline{244}_{five}$ $67_{eight} = \underline{56}_{ten}$

Make for comparison a chart in base ten and another base.

	b^4	b^3	b^2	b^1	b^0
base 10	10^4	10^3	10^2	10^1	10^0
1056		1	0	5	6
base 5	5^4	5^3	5^2	5^1	5^0
	1	3	2	1	1

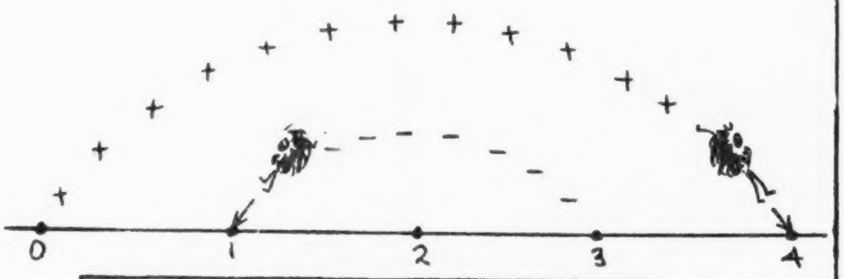
one thousand fifty-six =

$1056_{ten} = 13211_{five}$

Textual Resources	Related Resources	Notes
Numeration		
7. HM Book 6, p. 1-3		
8. HM Book 6, pp. 24, 184, 185	HM Visuals 6 (17)	
9. HM Book 6, pp. 25, 184, 185, 266	HM Visuals 6 (17)	
10. HM Book 6, pp. 29, 30		
11. HM Book 6, pp. 23, 31, 197, 329		

LEVEL G

ADDITION AND SUBTRACTION



Review of Level F Skills

1. Solves verbal (word) problems with skills learned to this point.
   Teacher note: Use the five-step method, student's page 40.

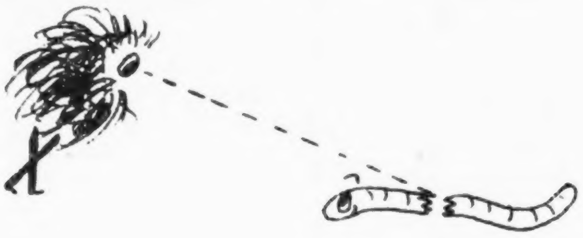
2. In-Depth.

Example

Addition and Subtraction

In one week, Tom earned $5.80 for mowing lawns, $2.50 for babysitting, and $2.00 for helping his Dad wash the car. If he spent $9.10 for baseball equipment, how much did he have left? \$ 1.20

MULTIPLICATION AND DIVISION



Review of Level F Skills

1. Rounds numbers for the purpose of estimating and checking products and quotients.

Multiplication and Division

Round each factor to the nearest 10 or 100, then estimate the product or the quotient.

348 x 786 = 300×800 = 240,000

1754 ÷ 31 = 1800 ÷ 30 = 60

Textual Resources	Related Resources	Notes
Addition and Subtraction		
HM Book 6, pp. 14, 15, 32-39	HM Visuals 6 (5) HM Masters 6 (3, 6, 7, 8)	
1. HM Book 6, pp. 40, 41		
2. HM Book 6, pp. 186, 187		
Multiplication and Division		
HM Book 6, pp. 14, 15, 42-47, 54-59, 66, 100, 110, 116, 180, 181	HM Visuals 6 (3-6) HM Masters 6 (3, 9, 10, 12, 23, 25, 26, 28)	
1. HM Book 6, pp. 60-62, 104, 105, 111-113	HM Visuals 6 (10) HM Masters 6 (13, 14, 23-26)	

LEVEL G	Example
Multiplication and Division	Multiplication and Division
2. Applies the concept that squaring a number and naming the square root are opposite (inverse) operations, e.g. $3^2 = 9$.	The square root of 81 is 9, so 9^2 is 81.
3. Multiplies a three or more digit numeral by a three digit number.	Multiply: 469 x 134 62,846
4. Uses the division algorithm with a three or more place divisor.	Divide: 6017 ÷ 138 = 43 R.83
5. Solves word (verbal) problems with skills learned to this point.	A moving van carried 14 boxes of books and 24 boxes of dishes. If each box weighed 25 pounds, how much did the books and dishes weigh? (14 x 24) x 25 = 8400 lbs.
6. Mixed Practice.	
7. In-Depth.	

Textual Resources	Related Resources	Notes
Multiplication and Division		
2. HM Book 6, pp. 122-124, 172, 274	HM Masters 6 (30)	
3. HM Book 6, pp. 104, 105	HM Visuals 6 (10) HM Masters 6 (23, 24)	
4.		
5. HM Book 6, pp. 48, 49, 63, 113-115, 136, 137, 178	HM Masters 6 (15, 27)	
6. HM Book 6, pp. 52, 53, 64, 65, 98, 117, 125, 141, 148, 179, 194, 211	HM Masters 6 (21, 26, 36, 36, 50)	
7. HM Book 6, p. 67, 129		

LEVEL G FRACTIONS	Example Fractions
 Review of Level F Skills	
1. Adds or subtracts fractional numbers with the same denominator using the distributive property.	Add or subtract. $\frac{2}{6} + \frac{1}{6} = (2+1) \times \frac{1}{6}$ $= 3 \times \frac{1}{6}$ $= \frac{3}{6}$ $= \frac{3 \div 3}{6 \div 3} = \frac{1}{2}$ $\frac{2}{6} - \frac{1}{6} = (2-1) \times \frac{1}{6}$ $= 1 \times \frac{1}{6}$ $= \frac{1}{6}$
2. Adds or subtracts combinations of mixed numbers.	Solve the following equations. $3\frac{1}{4} + 1\frac{1}{3} = \underline{4\frac{7}{12}}$ $3\frac{1}{4} - 1\frac{3}{4} = 2 + \frac{(1-3)}{4}$ $= 1 + \frac{(5-3)}{4}$ $= 1 + \frac{2}{4}$ $= 1\frac{1}{2}$
3. Applies the concept that multiplication and division are opposites.	Solve the following equation. $\frac{1}{5} \times 15 = 15 \div 5 = \underline{3}$

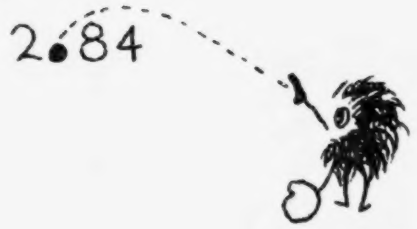
Textual Resources	Related Resources	Notes
Fractions		
HM Book 6, pp. 198-208, 212, 213, 216-219, 234, 234-236, 242	HM Visuals 6 (18) HM Masters 6 (41-46, 48, 51)	
1. HM Book 6, p. 209		
2. HM Book 6, pp. 214, 215, 220-224	HM Visuals 6 (19) HM Masters 6 (47, 49)	
3. HM Book 6, pp. 252, 253	HM Visuals 6 (21)	

LEVEL G	Example
Fractions	Fractions
4. Shows how the reciprocal may be used to replace division by multiplication.	Divide: reciprocal of $\frac{1}{2}$ is $\frac{2}{1}$. $\frac{4}{7} \div \frac{1}{2} = \frac{4}{7} \times \frac{2}{1}$ $= \underline{8/7}$ $= \underline{1\,1/7}$
5. Uses the multiplication algorithm with proper, improper, and mixed fractions having like and unlike denominators. Removes common factors from numerator and denominator.	Multiply. $4\frac{1}{7} \times \frac{2}{3} = \underline{2\,16/21}$
6. Divides simple fractions, improper fractions and mixed fractions. Writes answers in lowest terms. Estimates answers.	Estimate answer then divide. Reduce answer to lowest terms. Estimate: $\frac{5}{8} \div \frac{1}{2} = \underline{1\,1/4}$
7. Solves multiple step word problems with skills learned to this point.	There are 36 students in room A and 30 in room B. If 3/4 of the students in room A go to music and 2/5 of the students in room B go to the library, how many students will be left in the two rooms? 27 students
8. Mixed Practice.	
9. In-Depth.	

Textual Resources	Related Resources	Notes
Fractions		
4. HM Book 6, pp. 254, 255, 258, 259	HM Visuals 6 (21) HM Masters 6 (58, 59)	
5. HM Book 6, pp. 240, 241, 243-245, 260, 261	HM Visuals 6 (20) HM Masters 6 (52-57, 60)	
6. HM Book 6, pp. 256-259, 261	HM Visuals 6 (21) HM Masters 6 (59, 60)	
7. HM Book 6, pp. 210, 225, 237, 248, 262	HM Masters 6 (45)	
8. HM Book 6, pp. 230-233, 246, 247, 249, 264, 265, 285, 296, 317	HM Masters 6 (61, 67)	
9. HM Book 6, p. 267		

LEVEL G

DECIMALS

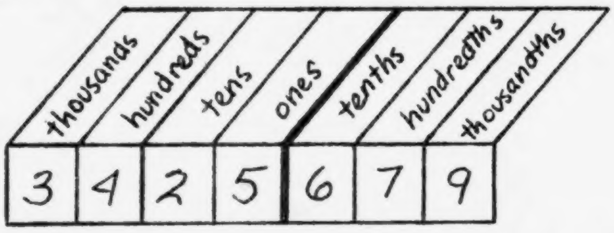


Example

Decimals

1. Makes a place value chart which shows place value positions of a decimal fraction.

Show 3425.679 on a place value chart.



thousands	hundreds	tens	ones	tenths	hundredths	thousandths
3	4	2	5	6	7	9

2. Makes or completes a decimal place value chart using positive exponents. Numbers to 10 . Uses fraction form in place of negative exponents.

Finish labeling the columns of this place value chart using powers to 10. Then enter the following numbers in your chart.

4,794.563
12,952.64

10^4	10^3	10^2	10^1	10^0	$1/10^1$	$\frac{1}{10^2}$	$1/10^3$
	4	7	9	4	5	6	3
1	2	9	5	2	6	4	

3. Writes the decimal equivalent for any proper or improper fraction and vice versa.

Write the decimal numerals equivalent to the given fractions.

25/4 = 6.25
7/8 = .875

4. Adds or subtracts numbers with whole number parts and decimals to the thousandths place. Addends need not have the same number of digits.

Add or subtract as indicated:

37.6 + 3.07 + 19.125 = 59.795

2867.05 - 791.3 = 2075.75

5. Multiplies a number in decimal form to thousandths by a whole number.

Multiply:

6791.04 x 8 = 54,328.32

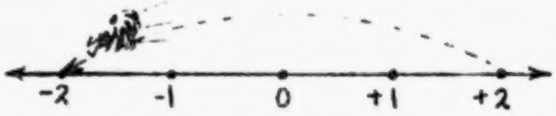
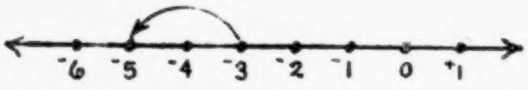
6. Multiplies a decimal number by a decimal number. (See four-step method on student's page 310).

Multiply:

347.21 x 6.3 = 2187.42

Textual Resources	Related Resources	Notes
Decimals		
1. HM Book 6, pp. 300, 301		
2. HM Book 6, pp. 17, 18, 298		
3. HM Book 6, pp. 299-301	HM Masters 6 (68)	
4. HM Book 6, pp. 302-304	HM Masters 6 (69)	
5. HM Book 6, pp. 306 , 307	HM Visuals 6 (24) HM Masters 6 (70)	
6. HM Book 6, pp. 308-310	HM Visuals 6 (24) HM Masters 6)71)	

LEVEL G	Example
Decimals	Decimals
7. Divides whole or decimal numbers by whole or decimal numbers. Annexes zeros to dividend when necessary.	Divide: 678.13 ÷ 2.1 = $322.9\frac{4}{21}$
8. Converts decimal and common fractions to per cent and vice versa.	Name the per cent as a decimal and the decimal as a per cent. 71% = .71 .31 = 31%
9. Solves addition and subtraction of fractional numbers in per cent form.	Add or subtract as indicated: 76% + 17% = 93% 85% - 16% = 69%
10. Names products involving per cents. Use decimal or fraction form.	Name the products: 20% of 100 = 20 1/5 of 100 = 20
11. Solves word problems using skills learned to this point.	Mrs. Thomas bought 2 1/2 yards of fabric at $2.50 a yard and 1 1/4 yards of fabric at $1.84 a yard. How much did she pay for all the fabric? $8.55
12. Mixed Practice.	

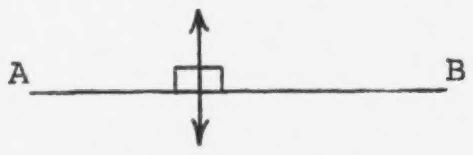
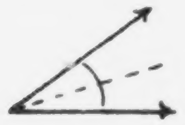
INTEGERS	Integers
	
1. Locates positive and negative integers on a number line or thermometer.	
2. Adds two negative integers with the use of a number line.	Solve the equation. $^{-}3 + {}^{-}2 = -5$ 

Textual Resources	Related Resources	Notes
Decimals		
7. HM Book 6, pp. 311-315	HM Visuals 6 (25) HM Masters 6 (72, 73)	
8. HM Book 6, pp. 318, 320, 321	HM Visuals 6 (26) HM Masters 6 (75)	
9. HM Book 6, p. 319	HM Visuals 6 (26) HM Masters 6 (75)	
10. HM Book 6, pp. 322-325	HM Visuals 6 (26) HM Masters 6 (76, 80)	
11. HM Book 6, pp. 305, 326	HM Masters 6 (35, 69)	
12. HM Book 6, pp. 316, 326-328	HM Masters 6 (74)	
Integers		
1. HM Book 6, pp. 332, 333		
2. HM Book 6, pp. 334, 335		

LEVEL G	Example
Integers	Integers
3. Adds two negative integers with the use of a number line.	Solve the equation. $^-2 + 3 =$ +1
4. Subtracts a negative integer from a negative integer.	Solve the equation. $^-5 - {}^-2 =$ -3
5. Subtracts a negative integer from a positive integer or a positive integer from a negative integer.	Solve the equation. $5 - (^-2) =$ +7 $2 - 5 =$ -7
* 6. Solves one and two-step word problems with positive and negative numbers.	In Alaska it was 7° above zero on December 29. During the night the temperature dropped 15°. What was the temperature then? 8° below zero
7. In-Depth.	

GEOMETRY	Geometry
Review of Level F Skills	
1. Uses metric units as related to each other by powers of 10 to measure length, weight and capacity.	Ten cubic centimeters of water weighs 10 grams.
2. Uses equations to name the number of units in the perimeter or surface area of a particular region.	Find the area of a circle with radius 1 feet. $A = \pi \times r^2$ $A = 3.14 \times 1^2 =$ 3.14 sq. ft.

Textual Resources	Related Resources	Notes
Integers		
3. HM Book 6, pp. 336, 337	HM Masters 6 (77)	
4. HM Book 6, pp. 338, 339 339		
5. HM Book 6, pp. 338, 339	HM Masters 6 (78, 79)	
6. HM Book 6, pp. 332, 333		
7. HM Book 6, pp. 340, 341	HM Masters 6 (80)	
Geometry		
HM Book 6, pp. 26, 68-74, 268 1.	HM Visuals 6 (7) HM Masters 6((16, 17)	
2. HM Book 6, pp. 78, 79, 83, 92, 93, 108, 109, 142, 143, 269, 271-275	HM Visuals 6 (9) HM Masters 6 (18, 19, 22, 62, 63)	

LEVEL G	Example
Geometry	Geometry
3. Uses equations to find the volume of closed surfaces.	Find the volume of a rectangle 4 inches wide, 8 inches high and 6 inches high? 4 x 8 x 6 = 192 cu. in.
4. Converts metric to English weight measures and vice versa.	Write the metric equivalents for the following weights. 5 pounds = 2.2 kg. 28.35 grams = 1 ounce
5. Weighs objects in grams and kilograms. Converts between grams and kilograms.	Weigh these objects and write their weights in grams and/or kilograms.
6. Identifies vertices, edges, and faces on models of cubes, triangular prisms, rectangular prisms, pentagons and hexagons.	Look at a triangular prism. List the number of vertices 6 . List the number of faces 5 . List the number of edges 9 .
7. Uses the concept of points, curves and surfaces to examine properties of planes.	The intersection of 2 planes is a line .
8. Identifies and draws the following: perpendicular bisector, triangles with bisected angles, congruent triangles, ellipse, line segments, polygons, regular hexagon, rhombus, linear pairs, acute and obtuse angles, isoceles and equilateral triangles.	Identify the following:  perpendicular bisector  bisected angle
9. Solves word problems using skills learned to this point.	A large box, used for storing play ground equipment, is 6 ft., 4 ft. wide and 3 ft. high. Find the area of the outside surface. Find the volume. A = 108 sq. ft. V = 72 cu. ft.

Textual Resources	Related Resources	Notes
Geometry		
3. HM Book 6, pp. 91-93, 109, 142, 143, 270, 271, 275	HM Visuals 6 (9) HM Masters 6 (22, 62, 63)	
4. HM Book 6, p. 27	HM Masters 6 (5)	
5. HM Book 6, p. 27		
6. HM Book 6, pp. 88, 89		
7. HM Book 6, pp. 68, 69, 86, 87, 90, 290, 291	HM Visuals 6 (9) HM Masters 6((21)	
8. HM Book 6, pp. 75, 76, 80-82, 84, 277, 280-283, 291	HM Visuals 6 (8, 23) HM Masters 6 (20, 64, 65)	
9. HM Book 6, pp. 85, 269, 275, 288, 289, 326	HM Masters 6 (63, 66)	

LEVEL G

Geometry

10. Mixed Practice.

11. In-Depth.

Example

Geometry

TIME

12
1
2
3
4
5
6
7
8
9
10
11

1. Works problems composed of time units: years, months, weeks, days, hours, minutes and seconds.

2. In-Depth.
Writes or selects name for very small and very large units of time and vice versa (include: nano-second, microsecond, millisecond, millenium, eon).

Time

John was born on August 14, 1952. How old was he on July 4, 1970. 17 yrs. 10mo. 16da.

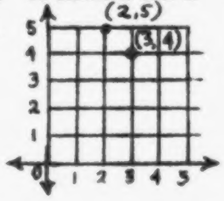
SPECIAL TOPICS

Review of Level F Skills

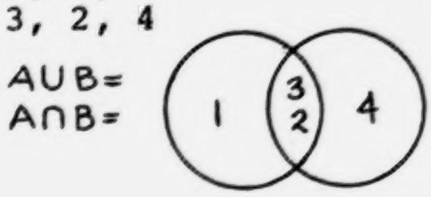
1. Locates points on a coordinate plane. Graphs ordered pairs. and function equations. Uses all quadrants.

Special Topics

Graph the sets of numerals on the number plane.
(2, 5) (3, 4)



Textual Resources	Related Resources	Notes
Geometry		
10. HM Book 6, pp. 77, 96, 97, 128, 278, 279, 294, 295 295	HM Masters	
11. HM Book 6, pp. 99, 284, 286, 287, 297	HM Masters 6 (66)	
Time		
1.		
2.		
Special Topics		
1. HM Book 6, pp. 94, 95, 144, 145, 292, 293	HM Visuals 6 (13) HM Masters 6 (34)	

LEVEL G	Example
Special Topics	Special Topics
2. Uses Venn (set) diagrams to picture the relationship between sets.	Draw diagrams to show $A \cup B$ and $A \cap B$. $A = 1, 2, 3$ $B = 3, 2, 4$ 
3. Uses fractional numbers to state probabilities.	If you choose any letter of the alphabet, what is the chance of choosing a letter that reaches below the base line. (26 letters in the alphabet) $7/26$
4. Applies certain assumptions or definitions to decide whether a statement is true or false.	Write a statement to disagree with the following: All humans walk on two feet. A new born baby does not walk on two feet.
5. Writes number sentences, including formulas and rates, to describe set relationship and operations.	Find the volume of a cylinder using the formula $V = (\pi \times r^2) \times h$. Diameter is 10" Height is 7 " V = 549.5
6. Collects data by observation or experimentation which may be analyzed or interpreted using statistical methods.	John's batting averages for each of his last five years were: 240, 264, 211, 240, 340. What is mean, median and mode of his scores? mode = 240 median = 240 mean = 259
7. Mixed Practice.	
8. In-Depth.	

Textual Resources	Related Resources	Notes
Special Topics		
2. HM Book 6, pp. 4, 5	HM Visuals 6 (1) HM Masters 6 (1)	
3. HM Book 6, pp. 226-229, 250, 251		
4. HM Book 6, pp. 150-159, 161	HM Visuals 6 (15) HM Masters 6 (36)	
5. HM Book 6, pp. 50, 51, 83, 106, 107, 142, 143, 270, 274, 295	HM Visuals 6 (22) HM Masters 6 (11, 33)	
6. HM Book 6, pp. 118-121, 140, 146, 147	HM Visuals 6 (11) HM Masters 6 (29)	
7. HM Book 6, pp. 126, 127		
8. HM Book 6, p. 163		

LEVEL G

TESTS

and

ANSWER KEYS

LEVEL G Name ____________________

NUMERATION Date ____________________

Skill 1

Write in words, numerals for each number.

1. 517,096,003 ____________________

____

2. 9,967,205,004 ____________________

____

Write in digit form.

3. six hundred billion, sixty-four thousand ____________

4. seven hundred ninety-six billion, four hundred million, one hundred seven thousand, three hundred twenty-two.

____

5. nine hundred thousand, seventy-seven. ____________

LEVEL G Name ____________________

NUMERATION Date ____________________

Skill 2, 3

Match the following phrases by placing the number of the phrase on the line before the correst number sentence.

(1) false number sentence
(2) true number sentence
(3) open number sentence
(4) neither true nor false open sentence
(5) solution set
(6) replacement set

_______ $x = 69$

_______ $96 = 69 + 27$

_______ $229 = 119 + 109$

_______ $x = 69 + 27$

_______ $987 > 784$

LEVEL G Name ______________________

NUMERATION Date ______________________

Skill 4

Circle the numerals that are divisible by 8.

1. 73, 91, 144, 215, 396, 688, 867

Check this problem by "casting out nines".

$$\begin{array}{rl} 48729 & \_\_\_\_ \\ \times \quad 15 & \_\_\_\_ \\ \hline 730935 \; = & \_\_\_\_ \end{array}$$

LEVEL G Name ______________________

NUMERATION Date ______________________

Skill 6, 7

Solve the clock equations in clock arithmetic.

1. $4 + 7 \overset{12}{=} a$ ____
2. $3 + 6 \overset{12}{=} b$ ____
3. $10 - 8 \overset{12}{=} c$ ____
4. $4 + 3 \overset{7}{=} d$ ____
5. $2 + (5+5) \overset{7}{=} e$ ____

If you were working with whole numbers would your answer on the problems be the same? Answer yes or no.

______

LEVEL G Name ______________________

NUMERATION Date ______________________

Skill 5

Give the prime factorization of the following and list the different prime factors.

	Factorization	Prime factors
1. 64 =		
2. 378 =		
3. 279 =		
4. 84 =		
5. 72 =		

Determine if the following numbers are prime or composite.

	Prime	Composite
1. 97		
2. 231		
3. 873		
4. 457		
5. 971		

LEVEL G Name ______________________

NUMERATION Date ______________________

Skill 8

1. Circle each set of numerals that could appear in a base 2 system.

6, 10, 1, 30, 111, 1001

2. Name the (a) place value, (b) face value, and (c) the total value of the digit 6 in each of the following numerals.

416_{eight} (a) _____ (b) _____ (c) _____

1067_{eight} (a) _____ (b) _____ (c) _____

3. Write the numerals that you would use in base twelve.

____

Level G Name ______________________

NUMERATION Date ______________________

Skill 9

1. Convert each of the following numerals to the designated base.

303_{five} _____ $_{\text{ten}}$

311_{ten} _____ $_{\text{five}}$

267_{ten} _____ $_{\text{eight}}$

267_{eight} _____ $_{\text{ten}}$

1001_{two} _____ $_{\text{ten}}$

2. Compare the place value of 12,347 in base ten and base eight.

12347_{ten}			base^4	base^3	base^2	base^1	base^0
			ten	ten	ten	ten	ten
			eight	eight	eight	eight	eight

LEVEL G Name ____________________

ADDITION AND SUBTRACTION Date ____________________

Skill 1

Solve and label.

1. At the school cake sale Jack collected $9.50, Phil collected $12.75, Glen collected $17.25, and Harry collected $8.00. How much money did the boys collect all together?

   ____

2. There was $6.75 in the class treasury when Steve was elected treasurer. Steve received $4.85 dues, and paid out $2.49 for aquarium equipment, and $1.32 for stationery and stamps. How much money remained in the treasury?

   ____

3. In a Chinese checkers game, Jim scored 25, 35, and 15 points. Betty scored 10, 14, and 23. Who won the game and by how much?

   ____

4. One orange grove contained 328 trees, another 589, another 232, and another 153 trees. How many trees were in the four groves?

   ____

5. An orange tree produced 10,107 oranges and another tree 7,754 oranges. How many more oranges were produced by the first tree than by the second tree?

   ____

LEVEL G Name ________________________

MULTIPLICATION AND DIVISION Date ________________________

Skill 1, 3, 4

1. Round the factors to the hundreds place and estimate the product. Work out the problems and compare your answer with the estimate.

```
  867  Rounded number ______
x 780  Rounded number ______
-----
```

________ answer ____________ Estimated answer

2.

```
  549  Rounded number _____
x 704  Rounded number _____
-----
```

________ answer ____________ Estimated answer

Round the divisor to hundreds, dividend to thousands, estimate the quotient, then work the problem.

3. $704\overline{)63271}$ $\overline{)\quad\quad\quad}$

4. $639\overline{)128570}$ $\overline{)\quad\quad\quad}$

5. $387\overline{)37762}$ $\overline{)\quad\quad\quad}$

LEVEL G Name ______________________
MULTIPLICATION AND DIVISION Date ______________________
Skill 2

Complete the number sentences.

1. $19^2 = 361$, so $\sqrt{361}$ = ______
2. $85^2 = 7225$, so $\sqrt{7225}$ = ______

Name the square roots.

3. $\sqrt{121}$ = ______
4. $\sqrt{196}$ = ______
5. $\sqrt{676}$ = ______

LEVEL G Name ______________________
MULTIPLICATION AND DIVISION Date ______________________

Skill 5
Solve and label.

1. Mr. Maxwell sold 2957 bushels of corn at $.95 a bushel. How much did he receive for the corn?

   ____

2. Mr. Maxwell raised the corn on 60 acres of land. What was the average yield per acre?

   ____

3. The P.T.A. sold school pictures at $1.50 per package. They sold 619 packages. The profit from this sale was $123.80. How much profit did they make on each package?

   ____

4. If the Bennett Causeway toll booth collects approximately $19.35 an hour, how much will it collect in a week?

   ____

5. Les and Tom helped to deliver 329 baskets of fruit. Each basket weighed 107 lbs. What was the total weight of the 329 baskets that Les and Tom delivered?

   ____

LEVEL G

FRACTIONS

Skill 1

Name ____________________

Date ____________________

Using the distributive property find the sums or differences. State the answer in lowest terms.

1. 2/3 + 3/4 = __/12 + __/__ = (__ + __) x __/__= ____

2. 5/5 - 2/3 = __/__ - __/__ = (__ - __) x __/__ = _____

3. 3/7 + 1/2 = __/__ + __/__ = (__ + __) x __/__ = __/__

4. 6/8 - 2/4 = __/__ - __/__ = (__ - __) x __/__ = __/__

5. 3/5 + 2/10 = __/__ + __/__ = (__ + __) x __/__ = __/__

LEVEL G

FRACTIONS

Skill 2

Name ____________________

Date ____________________

Solve the following problems. Show the answer in simplest form.

1. 6 2/3 + 1 1/4 + 1 1/2 = ___________

2. 3 2/11 + 3 1/22 = ___________

3. 4 3/8 - 2 1/16 = ___________

4. 9 3/4 - 2 1/3 = ___________

5. 6 1/4 - 3 1/2 + 2 1/8 = ___________

LEVEL G Name ______________________

FRACTIONS Date ______________________

Skill 3, 4

Solve the following equations.

1. (9 x 8) ÷ 8 = 9 x (8 ÷ __)

= 9 x ___ = ___

2. 1/5 x 35 = 35 ÷ __ = __

3. Dividing by 1/7 is the same as ____________________ by 7.

4. Dividing by 4 is the same as multiplying by its reciprocal _____.

5. The product of 1/9 and 9 is _______.

LEVEL G Name ______________________

FRACTIONS Date ______________________

Skill 5

Remove common factors.

1. 1/8 x 32/9 = ________

2. 14/15 x 4/42 = ________

3. 10 1/2 x 2/55 = ________

4. 7/8 x 12/14 = _______

5. 1 1/5 x 2 3/20 = ________

LEVEL G

FRACTIONS

Skill 6

Name ______________________________

Date ______________________________

Divide. Show estimated answer, then correct answer. Always reduce to the lowest terms.

1. 7/6 ÷ 4/9 = __________ estimate __________ answer

2. 13/4 ÷ 7/9 = __________ estimate __________ answer

3. 6/8 ÷ 5/7 = __________ estimate __________ answer

4. 2 3/4 ÷ 1 6/7 = __________ estimate __________ answer

5. $\frac{1/2}{5/6}$ = __________ estimate __________answer

LEVEL G Name ______________________

FRACTIONS Date ______________________

Skill 7

Solve and label.

1. The sixth grade girls bought 1 1/2 yards of yellow material and 3/4 yards of red material to decorate the bulletin board. They needed 3 1/2 yards to do the job. Would the girls need to buy more material? If so, how much more?

1. ________________

2. Doug caught a fish that weighed 3 3/4 pounds and Tommy caught a fish that weighed 2 1/8 pounds. What was the difference in weight between the two fish? How much did the catch weigh all together?

2. ________________

3. On a three day camping trip the boys walked 2 1/3 miles the first day, 2 miles the second day, and 3 2/3 miles the last day. What was the average mileage per day?

3. ________________

4. Ed uses 1 1/3 yards of string for each kite he makes. If he makes five kites, how many yards of string would he need? If he had twelve yards of string, how many kites could he make?

4. ________, ________

5. The sixth grade boys played 5/6 of an hour on the playground. They spent 6 3/5 of the time throwing basketball goals. For how long did they throw goals?

5. ________________

LEVEL G Name ____________________

DECIMALS Date ____________________

Skill 1, 2

Finish labeling the columns of this place value chart using powers of ten. Use fraction form in place of negative exponents. Then complete the chart.

	10^9							10^2				$\frac{1}{10^2}$				
3,648,231				3	6	4	8	2	3	1						
40.274																
3,427.6																
12.578									1	2	5	7	8			
97,321.01																
3,876,201,354																
86,472.41																

LEVEL G Name ____________________

DECIMALS Date ____________________

Skill 3

Write the decimal numerals equivalent to the given fractions.

1. 4/15 = __________ 2. 7/11 = __________

3. 25/4 = __________ 4. 9/2 = __________

Write the fraction equivalent to the given decimal numerals.

5. .86 = __________ 6. .97 = __________

7. 1.25 = ________ 8. .025 = __________

9. 6.66 2/3 = _______ 10. .75 = __________

LEVEL G Name ____________________

DECIMALS Date ____________________

Skill 4

Solve these equations.

1. .65 + .86 = __________ 2. 8.46 - 4.5 = __________

3. 4.37 + 26.1 + .38 + 4.8 + .26 = __________

4. 57.2 - 2.08 = __________

5. 62.3 + 31.9 - 14.7 = ____________

LEVEL G

DECIMALS

Skill 5, 6

Name ____________________

Date ____________________

Solve these equations.

1. 416.1 x 18 = __________

2. 3024.03 x 53 = __________

3. 42.312 x 38 = __________

4. 73.17 x 1.6 = __________

5. 96.7 x .8 = __________

LEVEL G

DECIMALS

Skill 7

Name ____________________

Date ____________________

1. $.6\overline{)243.6}$

2. $.5\overline{)6.75}$

3. $7\overline{)6.552}$

4. $5\overline{).4160}$

5. $1.23\overline{)261.99}$

LEVEL G
DECIMALS
Skill 8, 9, 10

Name ______________________________
Date ______________________________

Name the decimals as per cents.

1. .75 _______
2. .08 _______

Name the per cents as decimal fractions.

3. 9% _______
4. 100% _______

Convert the fractions to per cent and the per cent to fractions.

5. 13/20 = _______
6. 4% = _______

Name the sums or differences.

7. 32% + 67% = _______%
8. 57% - 48% = _______%

Solve.

9. 2% of 50 = _______
10. 86% of 53 = _______

LEVEL G

DECIMALS

Skill 11

Name ______________________

Date ______________________

Solve and label.

1. Mr. Browning works for a corporation that gave a 6% raise this year. If his salary last year was $7,200 , what is his gross monthly pay this year?

1.______________

2. Muriel rode down the Missouri Valley Trail. It is 10.7 miles to High Point, 43.16 miles to Evergreen, 79.016 miles to Terrace, and 5.4 miles on to the river. How long is the Missouri Valley Trail?

2.______________

3. Jerry caught 17 fish. The average weight was 1.37 pounds. What was the total weight of the fish? If he sold his catch at 39¢ per pound, how much did he make? Round your answer to the nearest hundredth.

3. _______ _______

4. Mr. Pike bought a shirt which had been marked down 25%. It originally sold for $8.96. How much did he pay for the shirt?

4. ______________

5. What is the volume of a square box which has a measurement of 3.9 inches on a side?

5. ______________

LEVEL G

INTEGERS

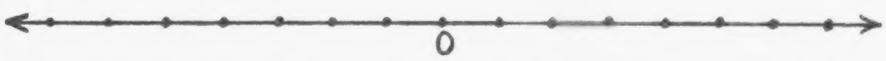
Skill 1

Name ______________________

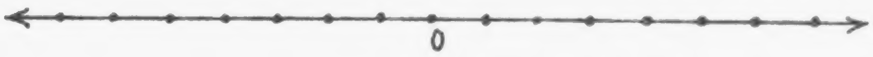
Date ______________________

Locate the following points on the number lines:

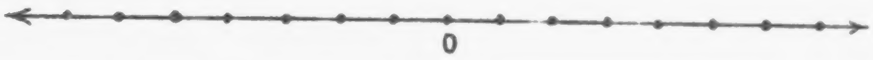
1. (-3) (+4)



2. (-1) (+2)

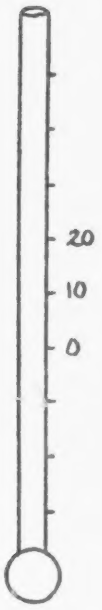


3. (+6) (-5)

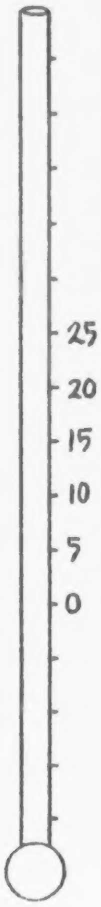


Complete the following thermometers:

4.



5.


25
20
15
10
5
0

LEVEL G

INTEGERS

Skill 2

Name ____________________

Date ____________________

Add.

1. (-4) + (-2) = ________

2. (-3) + (-1) = ________

3. (-1) + (-5) = ________

4. -5 + (-15) = ________

5. -15 + (-4) = ________

LEVEL G

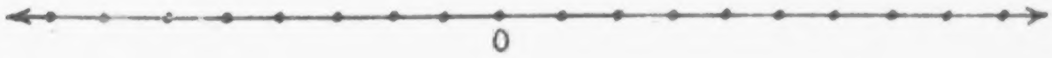
INTEGERS

Skill 3

Name ____________________

Date ____________________

Add.



1. +3 + (-2) = ________

2. +1 + (-4) = ________

3. (-3) + (+2) = ________

4. +30 + (-20) = ________

5. -53 + (+60) = ________

LEVEL G

INTEGERS

Skill 4

Name ______________________________

Date ______________________________

Subtract.

1. +4 - (+1) = __________

2. +4 - (+7) = __________

3. (-5) - (-1) = __________

4. -9 - (-2) = __________

5. +1 - (+2) = __________

LEVEL G

INTEGERS

Skill 5

Name ______________________________

Date ______________________________

Subtract.

1. +1 - (-4) = __________

2. +1 - (-1) = __________

3. -5 - (+1) = __________

4. -2 - (+3) = __________

5. -5 - (+3) = __________

LEVEL G

GEOMETRY

Skill 1

Name ______________________________

Date ______________________________

Relate the following metric units to each other by powers of 10.

1. 10^3 meters = __________ kilometer

2. 2 cubic centimeters = ______________ cubic millimeters

3. 30 grams = ____________________ decagrams

4. 70 decaliters = _________________ liters

5. 3 square centimeters = _________ square millimeters

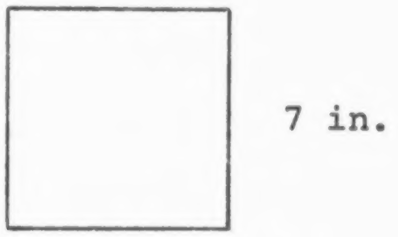
LEVEL G Name ____________________

GEOMETRY Date ____________________

Skill 2, 3

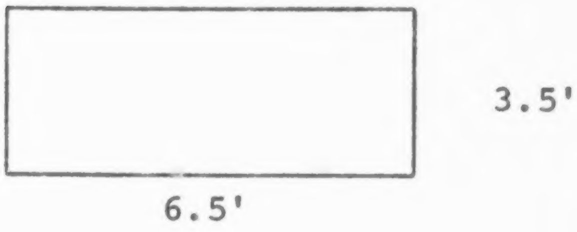
Solve and label.

1. Use an equation to find the perimeter of the square.



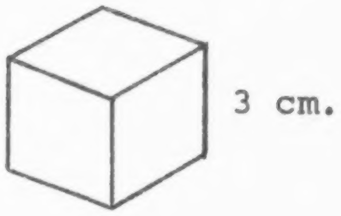
____

2. Use an equation to find the perimeter of the rectangle.



____

3. Use an equation to find the surface area of the cube.

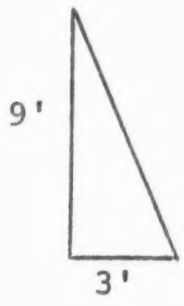


____

4. How many cubic feet in a rectangular box 3 by 9 by 12 feet?

____

5. Find the area of the right triangle.



____

LEVEL G

GEOMETRY

Skill 4

Name ______________________

Date ______________________

Write the metric equivalents for the following weights:

1 gram = 0.035 avoir du pois ounce

1 avoir du pois ounce = 28.350 grams

1 kilogram = 2.2 avoir du pois pounds

1 kilogram = 1000 grams

1. 516 kg. = ______________grams

2. 8½ oz. = __________________ grams

3. 6 oz. = __________________ kilograms

4. 16 grams = __________ avoir du pois ounces

5. 5 kilograms = ________________ ounces

LEVEL G   Name ______________________

GEOMETRY   Date ______________________

Skill 5

Solve these problems and label.

1. Which is the better buy, a kilogram of potatoes for 53¢ or 2 pounds of potatoes for 53¢?

____

2. Alice weighs 93½ pounds. Approximately how many kilograms does she weigh?

____

3. A well-known brand of tomato soup has the inscription "10½ oz.; 2.98 grams" on the label. From this information, determine about how many grams are equivalent to 1 ounce.

____

4. Anne bought 1,589 grams of hamburger meat. How many pounds was this?

____

5. A cat weighs 14 pounds. How many grams? ______________________

How many kilograms? ______________________

LEVEL G

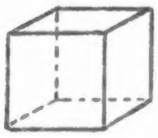
GEOMETRY

Skill 6

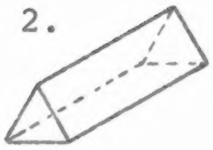
Name ______________________

Date ______________________

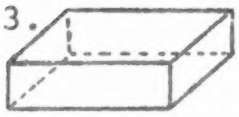
1.



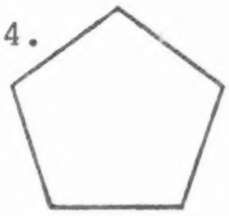
2.



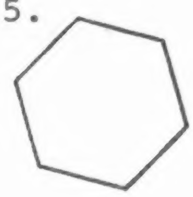
3.



4.



5.



Study the surfaces above, then complete the table.

Shape	Number of faces	Number of vertices	Number of edges
1. Cube			
2. Triangular prism			
3. Rectangular prism			
4. Pentagon			
5. Hexagon			

LEVEL G Name ______________________

GEOMETRY Date ______________________

Skill 7

The following list concerns the properties of planes.

Check the true statements.

1. A plane is the interior of a closed curve. ____________

2. A plane extends infinitely in all directions. __________

3. A plane is a flat surface. ________________

4. Three points in a line determine a plane. _______________

5. Planes are particular sets of points. ______________

LEVEL G

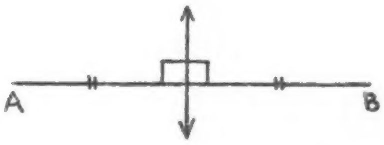
GEOMETRY

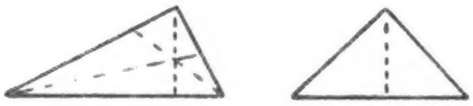
Skill 8

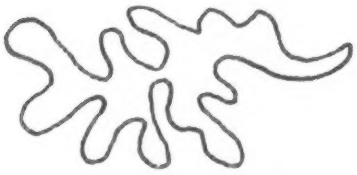
Name ______________________

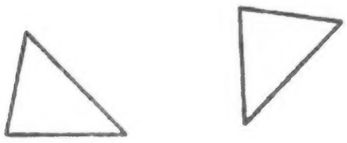
Date ______________________

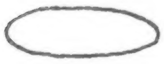
Match the following figures with the best answer. Use each letter only once.

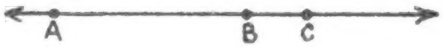
a. 

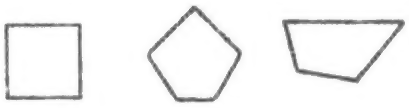
b. 

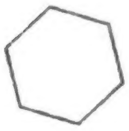
c. 

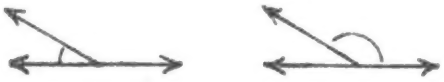
d. 

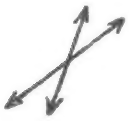
e. 

f. 

g. 

h. 

i. 

j. 

_____1. Line segments

_____2. Ellipse

_____3. Congruent triangles

_____4. Polygons

_____5. Regular hexagon

_____6. Angles

_____7. Triangles with bisected angles

_____8. Perpendicular bisector

_____9. Simple curve

____10. Linear pairs

LEVEL G

GEOMETRY

Skill 9

Name ________________________

Date ________________________

Solve and label.

1. One gallon of paint will cover 180 sq. ft. How many gallons of paint will it take to paint the walls of a room which is 10 ft. wide by 14 ft. long by 8 ft. high?

____

2. John wants to build a square box which will hold 1000 centimeter cubes. What size box will he need to build?

____

3. A playground has a length of 300 feet and a width of 250 feet. How many yards of fence will it take to fence the playground?

____

4. A science experiment called for 8 fluid drams of alcohol. John bought one pint. How many times could this experiment be tried from the pint of alcohol? (8 fl. drams = 1 oz.)

____

5. If the ratio of the telephone pole to its shadow is 6:5 , how high would the telephone pole be if it cast a 30' shadow?

____

LEVEL G

TIME

Skill 1

Name ______________________________

Date ______________________________

Name the sums or differences in the following problems.

1. 1 yr. 10 mo. 2 wk.
+ 4 yr. 6 mo. 1 wk.

2. 4 hr. 10 min.
- 3 hr. 40 min.

3. 4 min. 20 sec.
5 min. 30 sec.
+ 9 min. 40 sec.

4. 12 yr. 8 mo.
+ 24 yr. 5 mo.

5. Connie's birth date is June 11, 1958. How old was Connie at the time of the achievement test given April 15, 1970?

years months days

LEVEL G

SPECIAL TOPICS

Skill 1

Name ______________________________

Date ______________________________

Each student will need a sheet of ¼ inch graph paper.

Find and label the coordinate points on the coordinate plane.

A.	2,	8	(2,8)
B.	5,	-1	(5,-1)
C.	-3,	4	(-3,4)
D.	-6,	-5	(-6,-5)
E.	8,	2	(8,2)

LEVEL G

SPECIAL TOPICS

Skill 2

Name ____________________

Date ____________________

1. Draw a Venn diagram to show the union of S = (Jim, Ann, Ken) and A = (Bob, Ken, Cindy).

2. True or False.

   In the above diagram S ∩ A = Ken ____________

3. Write the equation for the following, showing intersection of sets.

   A = (Sept., Oct., Nov.)
   R = (Oct., Nov., Dec., Jan.) ____________________

4. Draw a Venn diagram for the following:

   (P,D,Q) U (P,D,Q) = (P,D,Q)

5. True or False.

   The intersection set of disjoint sets is the empty set.

   ____

LEVEL G Name ____________________

SPECIAL TOPICS Date ____________________

Skill 3

There are three marbles in a box. One is red, one is white, and one is blue. Below is a model listing all the possible orders in which they can be removed from the box.

RWB
RBW
BRW
BWR
WBR
WRB

Use this model to answer the following questions.

What is the probability that:

1. the first marble will be red? __________

2. the first marble will be red or white but not blue? __________

3. if the first marble is blue, the second marble will be white? __________

4. if the first marble is white, the second marble will also be white? __________

5. the first marble will be blue, the second red and the third white? __________

LEVEL G

SPECIAL TOPICS

Skill 4

Name ____________________________

Date ____________________________

Check the true statements, leave the false statements blank.

1. All squares are rectangles. ____________________________

2. No one digit numeral is a fraction. ____________________

3. All numbers are prime or composite. ____________________

4. If it is a number, then it is not a numeral. ________________

5. If it is a quadrilateral, then it must be a polygon or a triangle.

____

6. If it is a positive integer between 1 and 10, then it must have its opposite negative integer between - 1 and -10.

____

7. If an equation is a math sentence with an = sign between two expressions which name the same number, then 6 + x = 105 is not an equation.

____

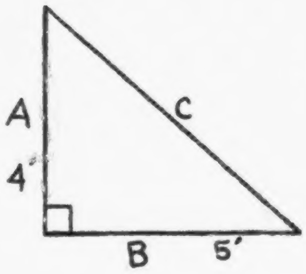
LEVEL G   Name ______________________

SPECIAL TOPICS   Date ______________________

Skill 5

Write a closed number sentence for the following problems.

1. Length of side A. ______________________



2. Volume of a box 9 inches by 6 inches by 4 inches.

____

3. Circumference of a circle with a radius of 2 feet.

____

4. The volume of a cylinder with a diameter of 4 inches and a height of 8 inches. Use $\pi = 3.14$

____

5. A car travels 480 miles in 8 hours. What was the average speed per hour?

____

LEVEL G

Name ______________________

SPECIAL TOPICS

Date ______________________

Skill 6

Each student will need a sheet of paper.
Draw a bar graph for each set of data.

1.

Liquid	Water	Oil	Gasoline	Sea Water	Kerosene
Pounds per gallon	8.33	7.497	5.664	8.58	6.664

2.

Material	Glass	Balsa Wood	Gold	Iron	Lead
Pounds per cubic foot	162.24	8.11	1203.4	486.72	705.1

3.-4. Name the averages for the data in exercises 1 and 2 rounded to the nearest tenth.

3.____________ 4.____________

5. Estimate the number of gallons of water needed to weigh about the same as a cubic foot of gold.

5 ____________

LEVEL G

NUMERATION

Skill 1

Name ________________________

Date ________________________

Write in words, numerals for each number.

1. 517,096,003 Five hundred seventeen million, ninety--six thousand, three
2. 9,967,205,004 nine billion, nine hundred sixty-seven million, two hundred five thousand, four

Write in digit form.

3. six hundred billion, sixty-four thousand 600,000,064,000
4. seven hundred ninety-six billion, four hundred million, one hundred seven thousand, three hundred twenty-two. 796,400,107,322
5. nine hundred thousand, seventy-seven. 900,077

LEVEL G

NUMERATION

Skill 2, 3

Name ________________________

Date ________________________

Match the following phrases by placing the number of the phrase on the line before the correst number sentence.

(1) false number sentence
(2) true number sentence
(3) open number sentence
(4) neither true nor false open sentence
(5) solution set
(6) replacement set

4 x = 69

5 96 = 69 + 27

1 229 = 119 + 109

3 x = 69 + 27

2 987 > 784

LEVEL G

NUMERATION

Skill 4

Name ______________________

Date ______________________

Circle the numerals that are divisible by 8.

1. 73, 91, [✓ 144] 215, 396, [✓ 688], 867

Check this problem by "casting out nines".

$$\begin{array}{rcr} 48729 & & \underline{3} \\ \times\ \ 15 & & \underline{\times 6} \\ 730935 & = & \underline{0} \end{array}$$

$3 \times 6 = 18 \cdot 9 = 0$

$0 = 0$

LEVEL G

NUMERATION

Skill 6, 7

Name ______________________

Date ______________________

Solve the clock equations in clock arithmetic.

1. $4 + 7 \overset{12}{=} a$ 11
2. $3 + 6 \overset{12}{=} b$ 6
3. $10 - 8 \overset{12}{=} c$ 2
4. $4 + 3 \overset{7}{=} d$ 0
5. $2 + (5+5) \overset{7}{=} e$ 5

If you were working with whole numbers would your answer on the problems be the same? Answer yes or no.

No

LEVEL G

NUMERATION

Skill 5

Name ______________________

Date ______________________

Give the prime factorization of the following and list the different prime factors.

	Factorization	Prime factors
1. 64 =	$2\times2\times2\times2\times2\times2$ or 2^6	2
2. 378 =	$2\times3\times3\times3\times7$ or $2\times3^3\times7$	2, 3, 7
3. 279 =	$3\times3\times31$ or $3^2\times31$	3, 31
4. 84 =	$2\times2\times3\times7$ or $2^2\times3\times7$	2, 3, 7
5. 72 =	$2\times2\times2\times3\times3$ or $2^3\times3^2$	2, 3

Determine if the following numbers are prime or composite.

	Prime	Composite
1. 97	✓	
2. 231		✓
3. 873		✓
4. 457	✓	
5. 971	✓	

LEVEL G

NUMERATION

Skill 8

Name ______________________

Date ______________________

1. Circle each set of numerals that could appear in a base 2 system.

6, [✓ 10], [✓ 1], 30, [✓ 111], [✓ 1001]

2. Name the (a) place value, (b) face value, and (c) the total value of the digit 6 in each of the following numerals.

416_{eight} (a) ones (b) 6 (c) 6

1067_{eight} (a) eights (b) 6 (c) 60_{eight}

3. Write the numerals that you would use in base twelve.

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, T, E

Level G

NUMERATION

Skill 9

Name ______________________

Date ______________________

1. Convert each of the following numerals to the designated base.

303_{five} = 78_{ten}

311_{ten} = 2221_{five}

267_{ten} = 413_{eight}

267_{eight} = 183_{ten}

1001_{two} = 9_{ten}

2. Compare the place value of 12,347 in base ten and base eight.

12347_{ten}			$base^4$	$base^3$	$base^2$	$base^1$	$base^0$
			1_{ten}	2_{ten}	3_{ten}	4_{ten}	7_{ten}
			3_{eight}	0_{eight}	0_{eight}	7_{eight}	3_{eight}

LEVEL G Name ______________________

ADDITION AND SUBTRACTION Date ______________________

Skill 1

Solve and label.

1. At the school cake sale Jack collected $9.50, Phil collected $12.75, Glen collected $17.25, and Harry collected $8.00. How much money did the boys collect all together?

$ 47.50

2. There was $6.75 in the class treasury when Steve was elected treasurer. Steve received $4.85 dues, and paid out $2.49 for aquarium equipment, and $1.32 for stationery and stamps. How much money remained in the treasury?

$ 7.79

3. In a Chinese checkers game, Jim scored 25, 35, and 15 points. Betty scored 10, 14, and 23. Who won the game and by how much?

Jim
by 28 points

4. One orange grove contained 328 trees, another 589, another 232, and another 153 trees. How many trees were in the four groves?

1302 trees

5. An orange tree produced 10,107 oranges and another tree 7,754 oranges. How many more oranges were produced by the first tree than by the second tree?

2,353 oranges

LEVEL G

MULTIPLICATION AND DIVISION

Skill 1, 3, 4

Name ____________________

Date ____________________

1. Round the factors to the hundreds place and estimate the product. Work out the problems and compare your answer with the estimate.

867	Rounded number	900
x 780	Rounded number	800

676,260
answer

720,000
Estimated answer

2.

549	Rounded number	500
x 704	Rounded number	700

386,496
answer

350,000
Estimated answer

Round the divisor to hundreds, dividend to thousands, estimate the quotient, then work the problem.

3. $704\overline{)63271}$ 89 r. 615 $700\overline{)63000}$ 90

4. $639\overline{)128570}$ 201 r. 131 $600\overline{)129000}$ 200

5. $387\overline{)37762}$ 97 r. 223 $400\overline{)38000}$ 90

LEVEL G Name ______________________

MULTIPLICATION AND DIVISION Date ______________________

Skill 2

Complete the number sentences.

1. $19^2 = 361$, so $\sqrt{361}$ = 19
2. $85^2 = 7225$, so $\sqrt{7225}$ = 85

Name the square roots.

3. $\sqrt{121}$ = 11
4. $\sqrt{196}$ = 14
5. $\sqrt{676}$ = 26

LEVEL G Name ______________________

MULTIPLICATION AND DIVISION Date ______________________

Skill 5

Solve and label.

1. Mr. Maxwell sold 2957 bushels of corn at $.95 a bushel. How much did he receive for the corn?

   $ 2809.15

2. Mr. Maxwell raised the corn on 60 acres of land. What was the average yield per acre?

   $49\frac{17}{60}$

3. The P.T.A. sold school pictures at $1.50 per package. They sold 619 packages. The profit from this sale was $123.80. How much profit did they make on each package?

   $ .20

4. If the Bennett Causeway toll booth collects approximately $19.35 an hour, how much will it collect in a week?

   $ 3250.80

5. Les and Tom helped to deliver 329 baskets of fruit. Each basket weighed 107 lbs. What was the total weight of the 329 baskets that Les and Tom delivered?

   35 203 lb.

LEVEL G

FRACTIONS

Skill 1

Name ____________________

Date ____________________

Using the distributive property find the sums or differences. State the answer in lowest terms.

1. 2/3 + 3/4 = 8/12 + 9/12 = (8 + 9) x 1/12= $1\frac{5}{12}$
2. 5/5 - 2/3 = 5/6 - 4/6 = (5 - 4) x 1/6 = $\frac{1}{6}$
3. 3/7 + 1/2 = 6/14 + 7/14 = (6 + 7) x 1/14 = 13/14
4. 6/8 - 2/4 = 6/8 - 4/8 = (6 - 4) x 1/8 = 1/4
5. 3/5 + 2/10 = 6/10 + 2/10 = (6 + 2) x 1/10 = 4/5

LEVEL G

FRACTIONS

Skill 2

Name ____________________

Date ____________________

Solve the following problems. Show the answer in simplest form.

1. 6 2/3 + 1 1/4 + 1 1/2 = $9\frac{5}{12}$
2. 3 2/11 + 3 1/22 = $6\frac{5}{22}$
3. 4 3/8 - 2 1/16 = $2\frac{5}{16}$
4. 9 3/4 - 2 1/3 = $7\frac{5}{12}$
5. 6 1/4 - 3 1/2 + 2 1/8 = $4\frac{7}{8}$

LEVEL G

FRACTIONS

Skill 3, 4

Name ______________________

Date ______________________

Solve the following equations.

1. (9 x 8) ÷ 8 = 9 x (8 ÷ 8)
   = 9 x 1 = 9

2. 1/5 x 35 = 35 ÷ 5 = 7

3. Dividing by 1/7 is the same as multiplying by 7.

4. Dividing by 4 is the same as multiplying by its reciprocal $\frac{1}{4}$.

5. The product of 1/9 and 9 is 1.

LEVEL G

FRACTIONS

Skill 5

Name ______________________

Date ______________________

Remove common factors.

1. 1/8 x 32/9 = $\frac{4}{9}$

2. 14/15 x 4/42 = 4/45

3. 10 1/2 x 2/55 = $\frac{21}{55}$

4. 7/8 x 12/14 = $\frac{3}{4}$

5. 1 1/5 x 2 3/20 = $2\frac{29}{50}$

LEVEL G

FRACTIONS

Skill 6

Name ______________________

Date ______________________

Divide. Show estimated answer, then correct answer. Always reduce to the lowest terms.

1. 7/6 ÷ 4/9 = 2 estimate $2\frac{5}{8}$ answer

2. 13/4 ÷ 7/9 = 3 estimate $3\frac{23}{28}$ answer

3. 6/8 ÷ 5/7 = 1 estimate $1\frac{1}{20}$ answer

4. 2 3/4 ÷ 1 6/7 = $1\frac{1}{2}$ estimate $1\frac{25}{52}$ answer

5. $\frac{1/2}{5/6}$ = 1 estimate $\frac{3}{5}$ answer

LEVEL G　　Name ______________________

FRACTIONS　　Date ______________________

Skill 7

Solve and label.

1. The sixth grade girls bought 1 1/2 yards of yellow material and 3/4 yards of red material to decorate the bulletin board. They needed 3 1/2 yards to do the job. Would the girls need to buy more material? If so, how much more?

1. yes, $1\frac{1}{4}$ yd.

2. Doug caught a fish that weighed 3 3/4 pounds and Tommy caught a fish that weighed 2 1/8 pounds. What was the difference in weight between the two fish? How much did the catch weigh all together?

2. $1\frac{5}{8}$ lbs. $5\frac{7}{8}$ lb.

3. On a three day camping trip the boys walked 2 1/3 miles the first day, 2 miles the second day, and 3 2/3 miles the last day. What was the average mileage per day?

3. $2\frac{2}{3}$ miles

4. Ed uses 1 1/3 yards of string for each kite he makes. If he makes five kites, how many yards of string would he need? If he had twelve yards of string, how many kites could he make?

4. $6\frac{2}{3}$ yd. 9 kites

5. The sixth grade boys played 5/6 of an hour on the playground. They spent 6 3/5 of the time throwing basketball goals. For how long did they throw goals?

5. 30 min

LEVEL G

DECIMALS

Skill 1, 2

Name ______________

Date ______________

Finish labeling the columns of this place value chart using powers of ten. Use fraction form in place of negative exponents. Then complete the chart.

	10^9	10^8	10^7	10^6	10^5	10^4	10^3	10^2	10^1	10^0	$\frac{1}{10^1}$	$\frac{1}{10^2}$	$\frac{1}{10^3}$			
3,648,231				3	6	4	8	2	3	1						
40.274									4	0	2	7	4			
3,427.6							3	4	2	7	6					
12.578									1	2	5	7	8			
97,321.01						9	7	3	2	1	0	1				
3,876,201,354	3	8	7	6	2	0	1	3	5	4						
86,472.41						8	6	4	7	2	4	1				

LEVEL G

DECIMALS

Skill 3

Name ______________________

Date ______________________

Write the decimal numerals equivalent to the given fractions.

1. 4/15 = $.26\overline{6}$

2. 7/11 = $.63\overline{63}$

3. 25/4 = 6.25

4. 9/2 = 4.5

Write the fraction equivalent to the given decimal numerals.

5. .86 = $\frac{43}{50}$

6. .97 = $\frac{97}{100}$

7. 1.25 = $\frac{5}{4}$ or $1\frac{1}{4}$

8. .025 = $\frac{1}{40}$

9. 6.66 2/3 = $\frac{20}{3}$ or $6\frac{2}{3}$

10. .75 = $\frac{3}{4}$

LEVEL G

DECIMALS

Skill 4

Name ______________________

Date ______________________

Solve these equations.

1. .65 + .86 = 1.51

2. 8.46 - 4.5 = 3.96

3. 4.37 + 26.1 + .38 + 4.8 + .26 = 35.91

4. 57.2 - 2.08 = 55.12

5. 62.3 + 31.9 - 14.7 = 79.5

LEVEL G

DECIMALS

Skill 5, 6

Name ____________________

Date ____________________

Solve these equations.

1. 416.1 x 18 = 7,449.8

2. 3024.03 x 53 = 160,273.59

3. 42.312 x 38 = 160.778

4. 73.17 x 1.6 = 117.072

5. 96.7 x .8 = 77.36

LEVEL G

DECIMALS

Skill 7

Name ____________________

Date ____________________

1.
406.
.6)243.6

2.
13.5
.5)6.75

3.
.936
7)6.552

4.
.0832
5).4160

5.
2 13.
1.23)261.99

LEVEL G

DECIMALS

Skill 8, 9, 10

Name ________________

Date ________________

Name the decimals as per cents.

1. .75 75%

2. .08 8%

Name the per cents as decimal fractions.

3. 9% .09

4. 100% 1.00

Convert the fractions to per cent and the per cent to fractions.

5. 13/20 = 65%

6. 4% = 1/25

Name the sums or differences.

7. 32% + 67% = 99 %

8. 57% - 48% = 9 %

Solve.

9. 2% of 50 = 1

10. 86% of 53 = 45.58

LEVEL G
DECIMALS
Skill 11

Name ____________________

Date ____________________

Solve and label.

1. Mr. Browning works for a corporation that gave a 6% raise this year. If his salary last year was $7,200 , what is his gross monthly pay this year?

1. $636.00

2. Muriel rode down the Missouri Valley Trail. It is 10.7 miles to High Point, 43.16 miles to Evergreen, 79.016 miles to Terrace, and 5.4 miles on to the river. How long is the Missouri Valley Trail?

2. 138.276 mi.

3. Jerry caught 17 fish. The average weight was 1.37 pounds. What was the total weight of the fish? If he sold his catch at 39¢ per pound, how much did he make? Round your answer to the nearest hundredth.

3. 23.29 lb $9.08

4. Mr. Pike bought a shirt which had been marked down 25%. It originally sold for $8.96. How much did he pay for the shirt?

4. $6.72

5. What is the volume of a square box which has a measurement of 3.9 inches on a side?

5. 59.319 cu in

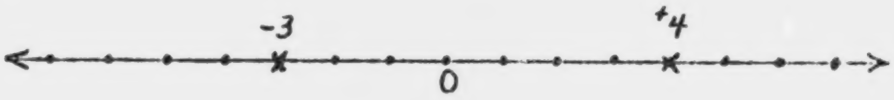
LEVEL G   Name ____________________

INTEGERS   Date ____________________

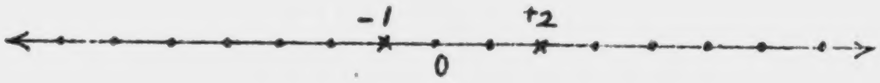
Skill 1

Locate the following points on the number lines:

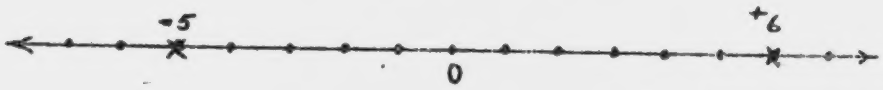
1. (-3) $(^{+}4)$



2. (-1) $(^{+}2)$

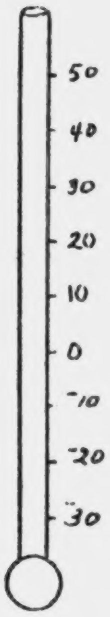


3. (+6) (-5)

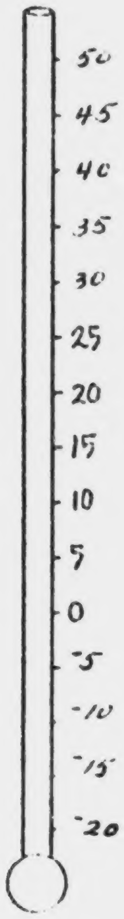


Complete the following thermometers:

4.


50
40
30
20
10
0
-10
-20
-30

5.


50
45
40
35
30
25
20
15
10
5
0
-5
-10
-15
-20

LEVEL G

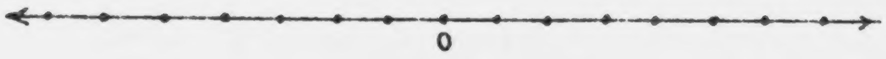
INTEGERS

Skill 2

Name ____________________

Date ____________________

Add.



1. (-4) + (-2) = -6

2. (-3) + (-1) = -4

3. (-1) + (-5) = -6

4. -5 + (-15) = -20

5. -15 + (-4) = -19

LEVEL G

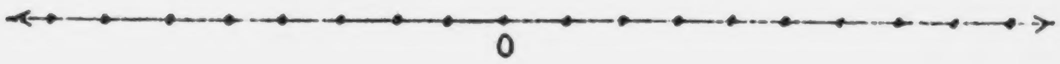
INTEGERS

Skill 3

Name ____________________

Date ____________________

Add.



1. +3 + (-2) = -1

2. +1 + (-4) = -3

3. (-3) + (+2) = -1

4. +30 + (-20) = +10

5. -53 + (+60) = +7

LEVEL G

INTEGERS

Skill 4

Name ______________________

Date ______________________

Subtract.

1. +4 - (+1) = $^{+}3$

2. +4 - (+7) = $^{-}3$

3. (-5) - (-1) = $^{-}4$

4. -9 - (-2) = $^{-}7$

5. +1 - (+2) = $^{-}1$

LEVEL G

INTEGERS

Name ______________________

Date ______________________

Skill 5

Subtract.

1. +1 - (-4) = $^{+}5$

2. +1 - (-1) = $^{+}2$

3. -5 - (+1) = $^{-}6$

4. -2 - (+3) = $^{-}5$

5. -5 - (+3) = $^{-}8$

LEVEL G

GEOMETRY

Skill 1

Name ______________________

Date ______________________

Relate the following metric units to each other by powers of 10.

1. 10^3 meters = 1 kilometer

2. 2 cubic centimeters = 2000 cubic millimeters

3. 30 grams = 3 decagrams

4. 70 decaliters = 700 liters

5. 3 square centimeters = 300 square millimeters

LEVEL G

GEOMETRY

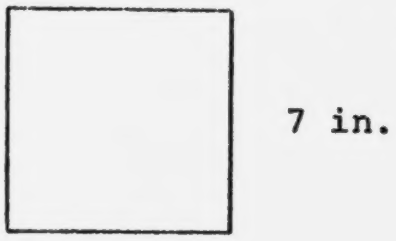
Skill 2, 3

Name ______________________

Date ______________________

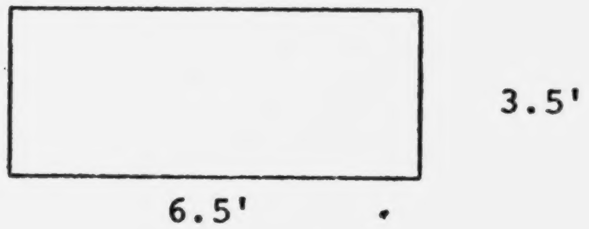
Solve and label.

1. Use an equation to find the perimeter of the square.



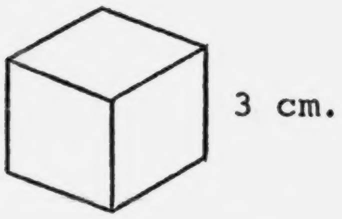
P = 4 x 7 = 28 in.

2. Use an equation to find the perimeter of the rectangle.



P = 2 x (3.5' + 6.5') = 20'

3. Use an equation to find the surface area of the cube.

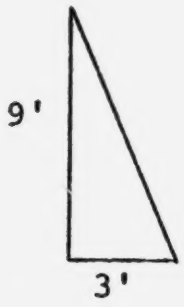


S = 6 x (3 cm. x 3 cm.)

4. How many cubic feet in a rectangular box 3 by 9 by 12 feet?

324 cu. ft.

5. Find the area of the right triangle.



$13\frac{1}{2}$ ft.

LEVEL G Name ______________________

GEOMETRY Date ______________________

Skill 4

Write the metric equivalents for the following weights:

1 gram = 0.035 avoir du pois ounce

1 avoir du pois ounce = 28.350 grams

1 kilogram = 2.2 avoir du pois pounds

1 kilogram = 1000 grams

1. 516 kg. = 516,000 grams

2. 8½ oz. = 240.975 grams

3. 6 oz. = .1701 kilograms

4. 16 grams = .56 avoir du pois ounces

5. 5 kilograms = 176.4 ounces

LEVEL G Name ______________________

GEOMETRY Date ______________________

Skill 5

Solve these problems and label.

1. Which is the better buy, a kilogram of potatoes for 53¢ or 2 pounds of potatoes for 53¢?

   1 Kg.

2. Alice weighs 93½ pounds. Approximately how many kilograms does she weigh?

   42.5 Kg.

3. A well-known brand of tomato soup has the inscription "10½ oz.; 2.98 grams" on the label. From this information, determine about how many grams are equivalent to 1 ounce.

   .28+ grams

4. Anne bought 1,589 grams of hamburger meat. How many pounds was this?

   3.49+ lb.

5. A cat weighs 14 pounds. How many grams? 6,350+ grams

   How many kilograms? 6.35+ Kg.

LEVEL G

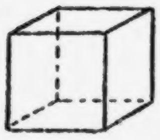
GEOMETRY

Skill 6

Name ______________________

Date ______________________

1.



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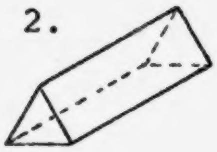

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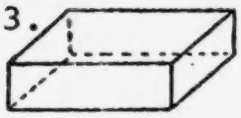

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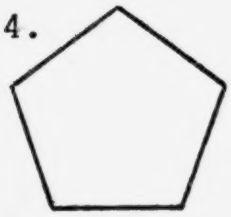

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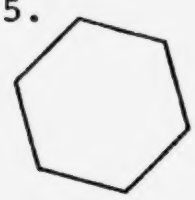


Study the surfaces above, then complete the table.

Shape	Number of faces	Number of vertices	Number of edges
1. Cube	6	8	12
2. Triangular prism	5	6	9
3. Rectangular prism	6	8	12
4. Pentagon	1	5	5
5. Hexagon	1	6	6

LEVEL G Name ______________________

GEOMETRY Date ______________________

Skill 7

The following list concerns the properties of planes.

Check the true statements.

1. A plane is the interior of a closed curve. ____________

2. A plane extends infinitely in all directions. ✓

3. A plane is a flat surface. ✓

4. Three points in a line determine a plane. ____________

5. Planes are particular sets of points. ✓

LEVEL G

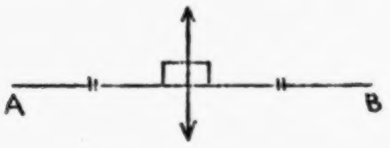
GEOMETRY

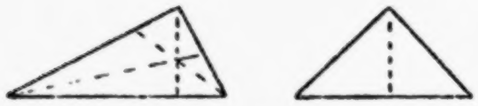
Skill 8

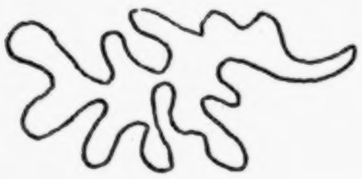
Name ____________________

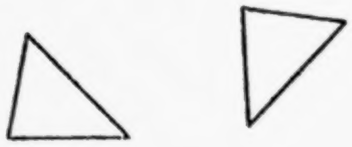
Date ____________________

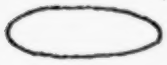
Match the following figures with the best answer. Use each letter only once.

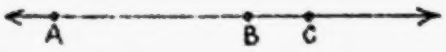
a. 

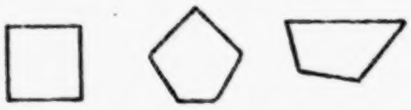
b. 

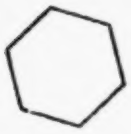
c. 

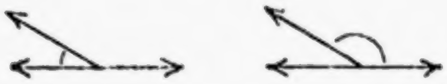
d. 

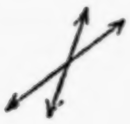
e. 

f. 

g. 

h. 

i. 

j. 

f. 1. Line segments

e. 2. Ellipse

d. 3. Congruent triangles

g. 4. Polygons

h. 5. Regular hexagon

j. 6. Angles

b. 7. Triangles with bisected angles

a. 8. Perpendicular bisector

c. 9. Simple curve

i. 10. Linear pairs

LEVEL G

GEOMETRY

Skill 9

Name ______________________________

Date ______________________________

Solve and label.

1. One gallon of paint will cover 180 sq. ft. How many gallons of paint will it take to paint the walls of a room which is 10 ft. wide by 14 ft. long by 8 ft. high?

$2\frac{6}{45}$ gal.

2. John wants to build a square box which will hold 1000 centimeter cubes. What size box will he need to build?

10 cm. x 10 cm. x 10 cm.
or 1 dm. x 1 dm. x 1 dm.

3. A playground has a length of 300 feet and a width of 250 feet. How many yards of fence will it take to fence the playground?

$366\frac{2}{3}$ yds.

4. A science experiment called for 8 fluid drams of alcohol. John bought one pint. How many times could this experiment be tried from the pint of alcohol? (8 fl. drams = 1 oz.)

16 times

5. If the ratio of the telephone pole to its shadow is 6:5 , how high would the telephone pole be if it cast a 30' shadow?

36 ft.

LEVEL G Name ______________________

TIME Date ______________________

Skill 1

Name the sums or differences in the following problems.

1.

	1 yr.	10 mo.	2 wk.
+	4 yr.	6 mo.	1 wk.
	6 yr.	4 mo.	3 wk.

2.

	4 hr.	10 min.
-	3 hr.	40 min.
		30 min.

3.

	4 min.	20 sec.
	5 min.	30 sec.
+	9 min.	40 sec.
	19 min.	30 sec.

4.

	12 yr.	8 mo.
+	24 yr.	5 mo.
	37 yr.	1 mo.

5. Connie's birth date is June 11, 1958. How old was Connie at the time of the achievement test given April 15, 1970?

11	10	4
years	months	days

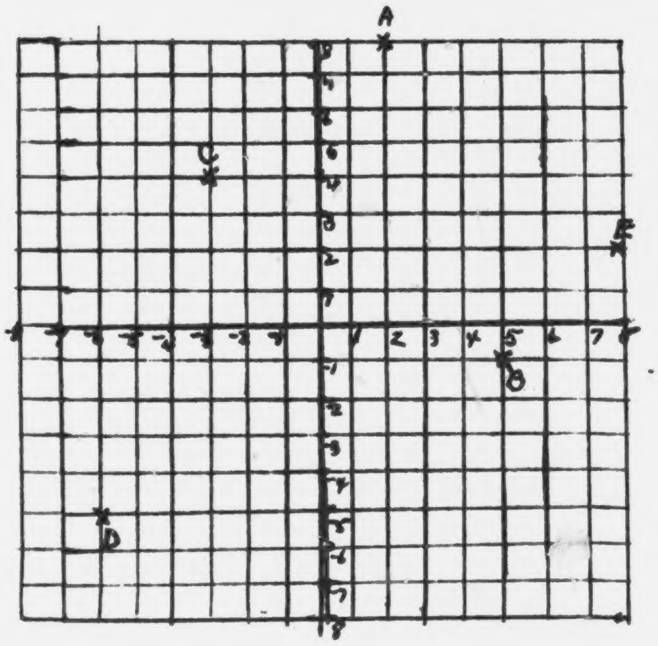
LEVEL G
SPECIAL TOPICS
Skill 1

Name ______________________________
Date ______________________________

Each student will need a sheet of ¼ inch graph paper.

Find and label the coordinate points on the coordinate plane.

A.	2,	8	(2,8)
B.	5,	-1	(5,-1)
C.	-3,	4	(-3,4)
D.	-6,	-5	(-6,-5)
E.	8,	2	(8,2)


A
C
E
B
D
-7 -6 -5 -4 -3 -2 -1
1 2 3 4 5 6 7
8 7 6 5 4 3 2 1
-1 -2 -3 -4 -5 -6 -7 -8

LEVEL G

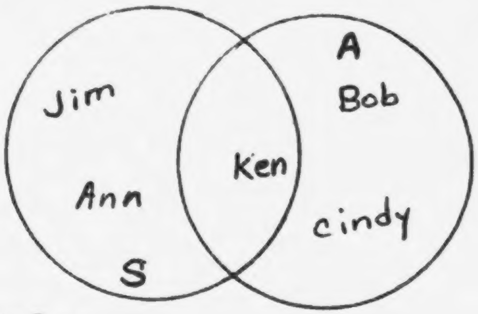
SPECIAL TOPICS

Skill 2

Name ______________________

Date ______________________

1. Draw a Venn diagram to show the union of S = (Jim, Ann, Ken) and A = (Bob, Ken, Cindy).



2. True or False.

In the above diagram S ∩ A = Ken ____True____

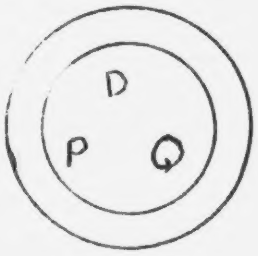
3. Write the equation for the following, showing intersection of sets.

A = (Sept., Oct., Nov.)
R = (Oct., Nov., Dec., Jan.)

$A \cap R =$ Oct., Nov.

4. Draw a Venn diagram for the following:

(P,D,Q) U (P,D,Q) = (P,D,Q)



5. True or False.

The intersection set of disjoint sets is the empty set.

____True____

LEVEL G Name ____________________

SPECIAL TOPICS Date ____________________

Skill 3

There are three marbles in a box. One is red, one is white, and one is blue. Below is a model listing all the possible orders in which they can be removed from the box.

RWB	BRW	WBR
RBW	BWR	WRB

Use this model to answer the following questions.

What is the probability that:

1. the first marble will be red? $\frac{2}{6}$ or $\frac{1}{3}$

2. the first marble will be red or white but not blue? $\frac{4}{6}$ or $\frac{2}{3}$

3. if the first marble is blue, the second marble will be white? $\frac{1}{6}$

4. if the first marble is white, the second marble will also be white? 0 or $\frac{0}{6}$

5. the first marble will be blue, the second red and the third white? $\frac{1}{6}$

LEVEL G Name ______________________

SPECIAL TOPICS Date ______________________

Skill 4

Check the true statements, leave the false statements blank.

1. All squares are rectangles. ___✓___

2. No one digit numeral is a fraction. ______

3. All numbers are prime or composite. ______

4. If it is a number, then it is not a numeral. ______

5. If it is a quadrilateral, then it must be a polygon or a triangle. ______

6. If it is a positive integer between 1 and 10, then it must have its opposite negative integer between - 1 and -10. ___✓___

7. If an equation is a math sentence with an = sign between two expressions which name the same number, then 6 + x = 105 is not an equation. ______

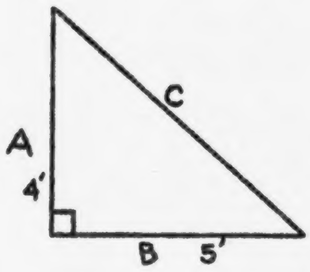
LEVEL G   Name ______________________

SPECIAL TOPICS   Date ______________________

Skill 5

Write a closed number sentence for the following problems.

1. Length of side A.



$C^2 = 4^2 + 5^2 \doteq 6.5$

2. Volume of a box 9 inches by 6 inches by 4 inches.

V= 9" X 6" X 4" = 216 cu. in

3. Circumference of a circle with a radius of 2 feet.

C= 3.14 X 4 = 12.56'

4. The volume of a cylinder with a diameter of 4 inches and a height of 8 inches. Use π = 3.14

$V = 3.14 \times 4^2 \times 8 = 401.92$ cu. i

5. A car travels 480 miles in 8 hours. What was the average speed per hour?

$r = \frac{480}{8} = 60$ m.p.h.

LEVEL G

Name ______________________

SPECIAL TOPICS

Date ______________________

Skill 6

Each student will need a sheet of paper.
Draw a bar graph for each set of data.

1.

Liquid	Water	Oil	Gasoline	Sea Water	Kerosene
Pounds per gallon	8.33	7.497	5.664	8.58	6.664

2.

Material	Glass	Balsa Wood	Gold	Iron	Lead
Pounds per cubic foot	162.24	8.11	1203.4	486.72	705.1

3.-4. Name the averages for the data in exercises 1 and 2 rounded to the nearest tenth.

3. 7.3

4. 513.1

5. Estimate the number of gallons of water needed to weigh about the same as a cubic foot of gold.

5 144 gal.

MATHEMATICS CONTINUUM

LEVEL H

BOOK I

The objectives for Level H have been written for the sixth year students who need a more extensive program than is provided in Level G. At this time, no related resources have been keyed in, nor have any tests been written.

Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and continuum mastery tests should be used to provide sufficient evidence to check the 70-100% (mastery level) for each skill.

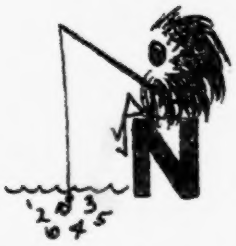
Metric and Non-Metric Geometry have been combined under the heading Geometry.

Money has not been keyed because it is interspersed with other topics.

The conversion tables are listed in the Strategy Manual.

LEVEL H

NUMERATION



1. Identifies a set as finite, infinite or empty (null). Names the elements of a set from a given word description and uses set notation.
   $A = \{\ \}$, $A = \emptyset$, $a \in A$, $a \notin A$

2. Names all subsets of a given finite set, both proper and improper, and uses subset symbols.
   $A \subset A$, $\emptyset \subset A$, $a \not\subset A$

3. Discriminates between equal, nonequal and equivalent sets.
   $A = B$, $A \neq C$

4. Performs operations on sets using the commutative and associative properties. Uses set notation or Venn diagrams to describe or picture these properties.
   $A \cap B = 1,2,3$ $\quad B \cap A = 1,2,3$
   $A \cap C = \emptyset$

5. Compares other number systems (primitive and modern) with the decimal system. Identifies base and place value, or lack thereof, for these systems. Uses tables.

Example

Numeration

Choose the word: finite, infinite or empty, which describes each of the following sets.

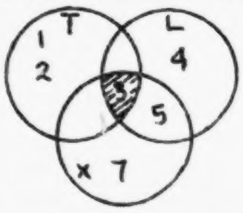
$A = \{a,b,c,\ldots\}$ infinite
$B = \{\ \}$ emoty or null
$C = \{a,c,d,\}$ finite

Place the correct symbol in the blanks. a $\in$ A U C but set A is $\neq$ C. Set B $\notin$ A U C.

Name all the subsets of C.
$C = \{a,c,b\}$
$\{\ \},\{a\},\{b\},\{c\},\{a,b\},\{a,c\},\{b,c\},\{a,b,c\}$

Is the following statement true or false? Two sets with the same number of elements are always equivalent but not always equal. TRUE

Draw a Venn diagram to illustrate the intersection of:
T = 1,2,3
L = 3,4,5
X = 3,5,7



Show the union using the associative property.
$(T \cap L) \cap X = T \cap (L \cap X)$

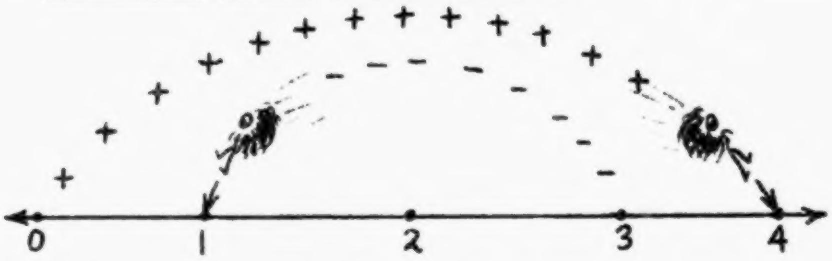
Use Egyptian hieroglyphics to rewrite 32_{ten} ∩∩∩||.

Compare the following table for 32_{ten}.

		face value	place value
decimal	3	3	tens
	2	2	ones
Egyptian	∩	10	no
	1	1	no

Textual Resources	Related Resources	Notes
Numeration		
1. HM Book 1, pp. 5-10, 16		
2. HM Book 1, pp. 11-14		
3. HM Book 1, pp. 14-19		
4. HM Book 1, pp. 19-27		
5. HM Book 1, pp. 104-129		

LEVEL H	Example
Numeration	Numeration
6. Recognizes and applies the terms twin primes, relatively prime, natural numbers, whole numbers and perfect numbers in problem situations.	Match the following terms with the correct example. a. twin primes b 1,2,3 b. natural numbers a 11,13 c. whole numbers d 7,30 d. relatively prime c 0,1,2,3
7. Discriminates between the terms prime factor and complete factorization. Gives the unique factorization property of natural numbers.	Show the prime factors and the complete factorization of the numeral 27. Prime factor 3 Prime factorization 3^3

ADDITION AND SUBTRACTION	Addition and Subtraction
	
1. Names and identifies the closure, commutative, associative, additive, comparison and difference - sum, properties, that exist for addition and subtraction in the set of whole numbers. Uses these properties in solving problems.	State the property shown by each of these examples: $150 + (25+75) = (150+25) + 75$ Associative $63 + 0 = 63$ Additive
2. Uses variables to represent an unspecified element of a given set. Replaces the variables with a numeral for one of its values in order to make a true statement.	Identify the true statements. $4 + N = N + 4$ T $N + 25 \neq 25 + N$ $N + 5 = 5 + N$ T
3. Adds or subtracts numbers written in exponential form with with the same base raised to the same negative or positive power.	Solve the following: $4\ (7)^3 + 2\ (7)^3 = 6(7)^3$ $8\ (5)^{-4} - 4\ (5)^{-4} = 4(5)^{-4}$

Textual Resources	Related Resources	Notes
Numeration		
6. HM Book 1, pp. 16, 221. 237		
7. HM Book 1, pp. 231-237		
Addition and Subtraction		
1. HM Book 1, pp. 34-65, 85		
2. HM Book 1, p. 41		
3.		

LEVEL H	Example
Addition and Subtraction	Addition and Subtraction
4. Adds or subtracts 1 and 2 digit numerals in base 2, 3, and 8. States answer either in designated base or in base ten.	Solve. $10_{three} + 121_{three} = 201_{three}$ $121_{three} - 10_{three} = 111_{three}$
5. Solves verbal problems with skills learned to this point.	Forty students are in a French class, 50 are in a biology class. Twelve of these are in both classes. How many students are in either the French or the biology class? 78 pupils
MULTIPLICATION AND DIVISION 	Multiplication and Division
1. Names and identifies the closure, commutative, associative and distributive properties that exist for multiplication and division in the set of whole numbers. Solves problems in multiplication and division using these properties.	State the property shown by each of these examples. 12 x 0 = 0 property of 0 7 x 6 = 42 closure 6 ÷ 1 = 6 property of 1 Write the letter of the correct statement. a The distributive property of multiplication is shown by the example. a. 7 x (5+3) = (5x7) + (7x3) b. 10 x (4x3) = (10x4) x 3 c. 7 x 8 = 8 x 7
2. Multiplies and divides number in exponential form with the same base in both positive and negative powers.	$7^{3} \times 7^{4} + 7^{7}$ $6^{-3} \div 6^{-2} = 6^{-1}$

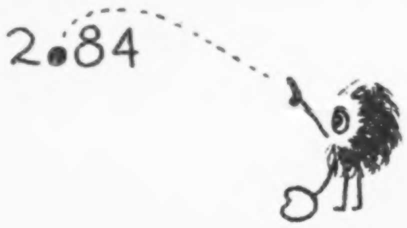
Textual Resources	Related Resources	Notes
Addition and Subtraction		
4.		
5. HM Book 1, pp. 39, 48, 49, 55, 56, 60, 149		
Multiplication and Division		
1. HM Book 1, pp. 71-100, 149-159		
2.		

LEVEL H	Example
Multiplication and Division	Multiplication and Division
3. Finds cubes of whole numbers and finds cube roots of numbers from simple tables or experimentation.	Cube the following: 6^3 = 216 Find the cube root of 8 = 2
4. Solves verbal problems with skills learned to this point.	Mr. Harris works as a car salesman. His contract calls for a salary of $300.00 monthly, plus a commission of $150.00 for each new car sold and $50.00 for each used car sold. What will be his total yearly salary if he sells 21 new cars and 17 used cars? $7600.00

FRACTIONS

1. Defines a fraction as a rational number (a/b) where b ≠ 0. Writes whole numbers, mixed fractions and decimals in standard form (a/b) as a member of the set of rational numbers.	Express each number as a rational number (a/b). 5 = 5/1 6 1/2 = 13/2 .33 = 33/100
2. Demonstrates proficiency in the computational skills of addition, subtraction, multiplication and division in the set of rational numbers.	Solve the following equation. $\left(\frac{2}{3} + \frac{1}{2}\right) \div \frac{1}{4} =$ $4\frac{2}{3}$
3. Orders two, three or four rational numbers, including numbers of mixed form.	Order the following. .37, 1/3. 1 1/2, 1/5 1/5, 1/3, .37, 1 1/2

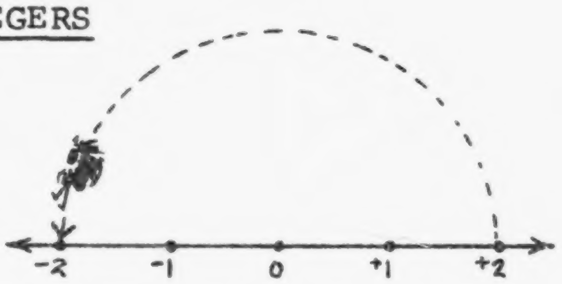
Textual Resources	Related Resources	Notes
Multiplication and Division		
3. HM Book 1, p. 113		
4. HM Book 1, pp. 75, 80, 84		
Fractions		
1. HM Book 1, pp. 308, 309, 315, 326		
2. HM Book 1, pp. 336-357		
3. HM Book 1, pp. 359, 364		

LEVEL H	Example
Fractions	Fractions
4. Uses the basic property of fractions.	$\frac{75}{100} = \frac{75-25}{100 - 25}$ and $\frac{3\times25}{4\times25} = \frac{75}{100}$
5. Solves statement (verbal) problems with emphasis on computational skills in the set of rational numbers.	Mr. Wills owns 5/9 of a company, while Mr. Rand owns 1/4 of the company. After Mr. Wills sells 3/5 of his share to a third man who then has a smaller share in the company, Mr. Wills or Mr. Rand? Why? Mr. Wills $\frac{2}{9} < \frac{1}{4}$
DECIMALS  	Decimals
1. Extends whole numbers numeration to decimal numeration in exponential notation. Limit - the ten-millionth place.	Write this numeral in expanded form. 327.0015796 $(3\times100)+(2\times10)+(7\times1)+(0\times\frac{1}{10})+(0\times\frac{1}{100})+$ $(1\times\frac{1}{1000})+(5\times\frac{1}{10,000})+(7\times100,000)+$ $(9\times\frac{1}{1,000,000})+(6\times\frac{1}{10,000,000})$
2. Applies the algorithms for addition, subtraction, multiplication and division of whole numbers to decimal numerals. Uses estimation for purpose of checking answers.	Rounds to the nearest whole number, estimate answer, then work problem. 15.316 + 9.02 + 102.77 15 + 9 + 103 = 127 127.106
3. Orders sets of decimals.	Order the following decimals. .06532, .179621, .003275 .003275, .06532, .179621

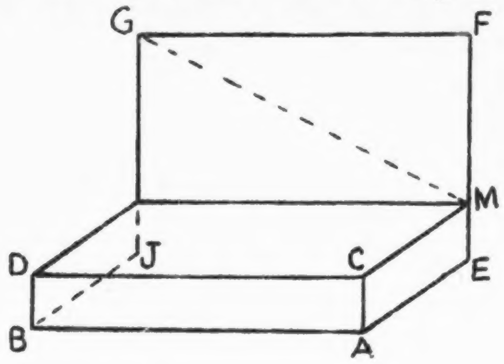
Textual Resources	Related Resources	Notes
Fractions		
4. HM Book 1, pp. 332-336		
5.		
Decimals		
1. HM Book 1, pp. 373, 374		
2. HM Book 1, pp. 379-381, 397-402		
3. HM Book 1, pp. 406, 407		

LEVEL H	Example
Decimals	Decimals
4. Identifies the place value of a common fraction in a mixed decimal.	What is the value of the 3/4 in this number. $.0163\frac{3}{4}$ $\frac{3}{4}$ thousandths
5. States the decimal approximation for a given number to a given place.	Round the following numbers as indicated. 791.1725 - nearest thousandth 791.173 2.7654 - nearest tenth 2.8
6. Identifies and gives examples of terminating and repeating (non-terminating) decimals. Writes repeating decimals in either of 2 forms.	Identify the repeating decimals by rewriting them in proper form. .09 .09... .083 $.08\overline{3}$ .75
7. Converts decimal fractions to common fractions in lowest terms to the ten-millionths' place and vice versa.	Change the decimal fractions to common fractions and the common fractions to decimals. $3.65 = 3\frac{13}{20}$ $5\frac{1}{12} = 5.08\overline{33}$
8. Solves word problems with skills learned to this point.	If the orbital velocity of the earth is 18.5 miles per second, how far does the earth travel between 11:00 a.m. and 12:30 p.m. of a given day? 99,900 miles

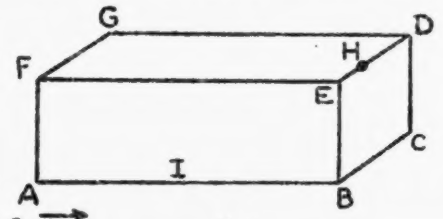
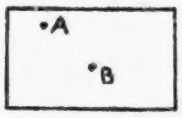
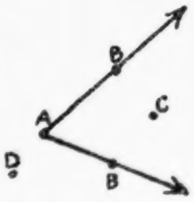
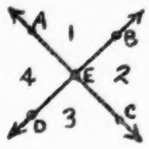
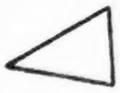
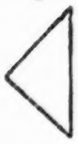
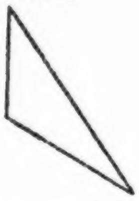
Textual Resources	Related Resources	Notes
Decimals		
4. HM Book 1, p. 387		
5. HM Book 1, pp. 383, 385		
6. HM Book 1, pp. 389-393		
7. HM Book 1, pp. 386-389		
8. HM Book 1, pp. 382, 383, 397, 402		

LEVEL H	Example
INTEGERS  	Integers
1. Orders a set which contains both positive and negative integers.	Order this set of integers. -3, +3, -5, +5, 0 $^-5, ^-3, 0, ^+3, ^+5$
2. Raises any positive or negative integer to any positive or negative power.	Work the following. $(+6)^{-3}$ = $6/1000$ $(-3)^{+3}$ = $^-27$
3. States, identifies, and gives examples of the properties of addition, subtraction, multiplication and division in the set of directed integers. Compares this system to the system of whole numbers.	Indicate = or ≠ for each sen= tence. $-3 + 4 = 4 + (-3)$ $2 - 3 \neq 3 - 2$ What property of operation(s) exist(s) in the set of integers that does not hold true in the set of whole numbers? closure of subtraction
4. Demonstrates proficiency in the computational skills of addition, subtraction, multiplication, division and exponentiation of directed integers.	Perform the indicated operation. $-275 + 87 = ^-182$ $-788 - (-15) = ^-773$ $8 \times (-17) = ^-136$ $364 \div (-52) = ^-7$
5. Solves statement (verbal) problems with emphasis on computational skills in the set of directed integers.	Suppose that gasoline is flowing into a tank at the rate of 4 gallons per minute. Compare the amount of gasoline in the tank now with the amount in the tank (a) 5 minutes in the future; (b) 3 minutes ago a = 20 gal. more b = 12 gal. less

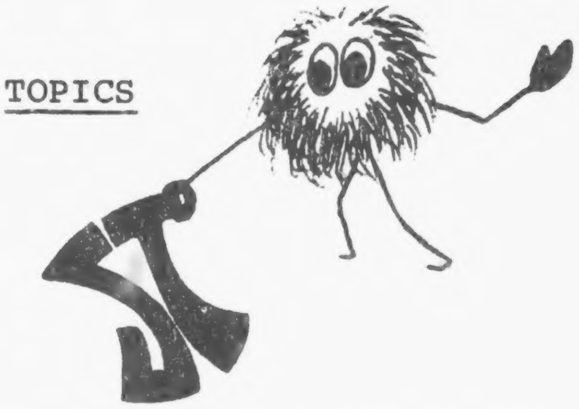
Textual Resources	Related Resources	Notes
Integers		
1.HM Book 1, p. 501		
2.		
3. HM Book 1, pp. 504-521		
4. HM Book 1, pp. 504-521		
5. HM Book 1, pp. 509, 513, 517, 525		

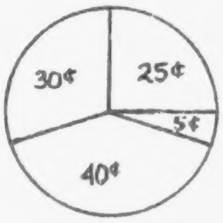
LEVEL H GEOMETRY	Example Geometry
1. States and identifies geometric properties associated with points, lines, planes and space.	The following phrases are true for points, lines, planes or space. Classify accordingly. A. Area is limitless. space B. Two intersecting lines determine a plane. C. If two planes intersect, then they intersect in a line. D. A point has neither color, shape nor size.
2. Identifies coplanar, noncoplanar, collinear, noncollinear points, coplanar, noncoplanar, coincident, noncoincident, concurrent, nonconcurrent lines, coincident, noncoincident, concurrent, nonconcurrent planes.	Match the words to the correct meaning. A. coplanar B. coincident C. concurrent lines B consisting of the same points in space C contain a given point A lying in a plane
3. Describes the relationships between defined rays.	Choose the letter of the word that shows the relationships between the stated line segments.  $\overrightarrow{AC}$ and $\overrightarrow{CA}$ C A Parallel $\overrightarrow{BJ}$ and $\overrightarrow{MG}$ B B Skew $\overrightarrow{DB}$ and $\overrightarrow{EM}$ A C Collinear

Textual Resources	Related Resources	Notes
Geometry		
1. HM Book 1, pp. 167, 197		
2. HM Book 1, pp. 197-204		
3. HM Book 1, pp. 252-257		

LEVEL H	Example
Geometry	Geometry
4. Identifies segments, parallel segments, intersecting segments, skew segments, collinear segments, segments neither parallel nor skew.	Are the following line segments parallel or skew?  $\overrightarrow{AB}$ and $\overrightarrow{EF}$ parallel $\overrightarrow{EH}$ and $\overrightarrow{FA}$ skew
5. Tests to determine if two points are in opposite half planes of a line.	Are points A and B in opposite half planes? yes 
6. States the definition for and identifies an angle, its vertex, side, interior, exterior. Measures and constructs straight, straight, vertical, complementary, congruent, adjacent, and consecutive angles.	Label the drawing. A. Vertex B. Side C. Interior D. Exterior  Angle A Using this figure name two pairs of vertical angles ($\angle 1, \angle 3$) ($\angle 2, \angle 4$). Name two straight angles($\angle AEC$)($\angle DEB$). Name congruent angles ($\angle 1, \angle 2, \angle 3, \angle 4$). Angle B 
7. Classifies triangles in terms of angles as acute, obtuse, right, equiangular or in terms of sides as scalene, isoceles or equilateral.	Name the following triangles: acute  right  obtuse 
8. Determines the perimeter and the area of various regions in a plane. Uses formulas to find the volume of familiar solids, prisms and pyramids.	Find the area of a trapezoid whose parallel sides are 4" and 8" long, if the altitude is 2". area 12 sq. in. Find the volume of a rectangular prism which measures 5" by 4" by 1 1/2". volume 30 cu. in.

Textual Resources	Related Resources	Notes
Geometry		
4. HM Book 1, pp. 257-262		
5. HM Book 1, pp. 262-267		
6. HM Book 1, pp. 268-280 423-428		
7. HM Book 1, pp. 413, 427, 428		
8. HM Book 1, pp. 431, 448, 454-457		



LEVEL H **SPECIAL TOPICS**	**Example** **Special Topics**
1. Defines ratio as a comparison of two numbers and expresses it in any or all of three ways; 4 to 5, $\frac{4}{5}$, or 4:5.	There were 5 boys for every three girls in class. Express the ratio of boys to girls in three ways. 5 to 3 $\quad$ $5/3$ $\quad$ 5:3
2. Defines proportion as a statement that two ratios are equal. Finds the unknown term in a proportion.	At a picnic the ratio of adults to children was 3 to 5. If there were 21 adults, how many children were there? $3/5 = 21/x$ $3x = 105$ $x = 35$ children
3. Solves interest problems using the formula I = (P x R) x T.	The current interest rate on certificates is 7%. How much income per year would Mr. Jones have if he owned $60,000 worth of certificates? $I = (60{,}000 \times 7\%) \times 1 = \$4{,}200$
4. Constructs line, circle and bar graphs from given tables of data and extracts data from a given graph.	Out of every dollar spent for medical care, 30¢ is spent for hospital service, 40¢ for doctor's services, 25¢ for medicine and 5¢ for medical cost. Show this on a circle graph. 
5. Defines and computes mean, median and mode.	Here is a frequency table of test scores. 30 $\quad$ 1 $\quad$ 25 $\quad$ 111 29 $\quad$ 11 $\quad$ 20 $\quad$ 11 27 $\quad$ ~~1111~~ What is the: mean 26 median 27 mode 27

Textual Resources Special Topics	Related Resources	Notes
1. HM Book 1, pp. 464, 458		
2. HM Book 1, pp. 467, 475		
3. HM Book 1, pp. 477, 481		
4. HM Book 1, pp. 481-492		
5. HM Book 1, pp. 491-494		

MATHEMATICS CONTINUUM

LEVEL I

BOOK II

The objectives for Level I have been written for the sixth year students who need a more extensive program than is provided in Level H. At this time, no related resources have been keyed in, nor have any tests been written.

Continual evaluation of skills should be made by the teacher. The mastery tests were designed to be given near the end of the year or when success is evident. Teacher tests, teacher judgment, and continuum mastery tests should be used to provide sufficient evidence to check the 70-100% (mastery level) for each skill.

Fractions, Decimals and Integers have been combined under the heading Rational Numbers.

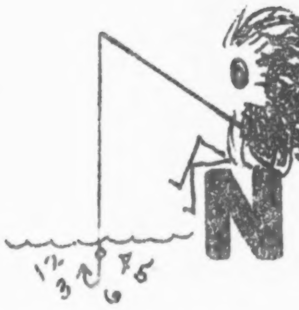
Metric and Non-Metric Geometry have been combined under the heading Geometry.

Money has not been keyed because it is interspersed with other topics.

The conversion tables are listed in the Strategy Manual.

LEVEL I

NUMERATION



1. Answers multiple choice questions to show that the set of whole numbers, directed integers, rational numbers, irrational numbers and natural numbers are subsets of the set of real numbers. Constructs a Venn diagram to show the subset relationships between these sets of numbers.

2. States and identifies the location of the decimal point, relative to standard position and gives the exponent that would be used in writing a given number in scientific notation. Uses both positive and negative exponents.

Example

Numeration

Are the following statements true or false?

A. Integers are a subset of the rational numbers. T

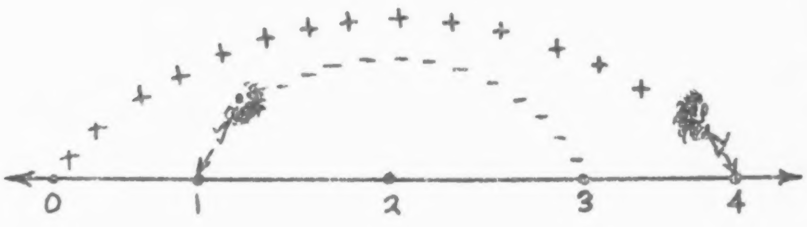
B. Every whole number is an integer. T

C. The set of natural numbers is not a subset of the rational numbers. F

Write in decimal notation.
1.27×10^3 1270

Write in scientific notation.
.003 3×10^{-3}

ADDITION AND SUBTRACTION



1. States and/or uses the properties of addition and subtraction for rational numbers. Compares these properties with the properties for addition and subtraction of whole numbers, the set of natural numbers and the set of integers.

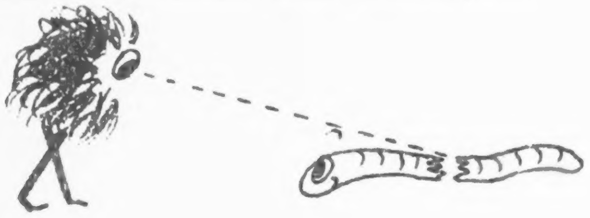
Addition and Subtraction

Give the property of addition which applies to the following.

$(+1/3 + -1/4) + -1/2 = +1/3 + (-1/4 + 1/2) =$ Associative

$+5/3 + -4/3 = +1/3$ Closure

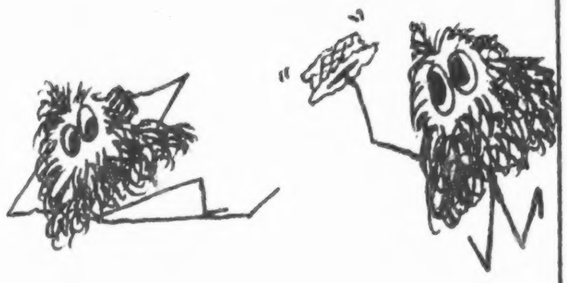
Textual Resources	Related Resources	Notes
Numeration		
1. HM Book II, pp. 7, 9, 10, 235		
2. HM Book II, pp. 161-168		
Addition and Subtraction		
1. HM Book II, pp. 32-58, 72		

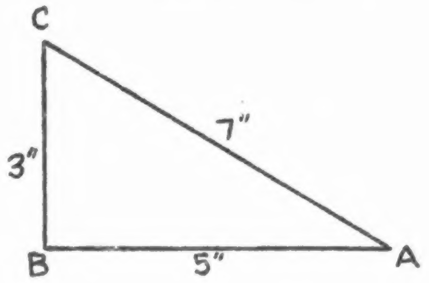
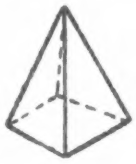
LEVEL I	Example
Addition and Subtraction	Addition and Subtraction
2. Expresses subtraction problems in terms of addition problems.	Write a subtraction fact associated with the sum 5 + -2 = 3. 3-5 = -2
3. Solves open number sentences by using transformations.	Solve. 2x + 6 = 5 + 5 2x + 6 = 10 2x = 10-6 2x = 4 x = 2
MULTIPLICATION AND DIVISION	Multiplication and Division
	
1. Multiplies or divides numbers written in scientific notation.	Solve and write the answer in both scientific notation and decimal notation. $(8 \times 10^5) \div (4 \times 10^3) = 2 \times 10^2$ = 200
2. Multiplies or divides a positive rational number and a negative rational number and vice versa or two negative rational numbers.	Solve. A. 3/4 x -1/9 = -1/12 B. -2/3 x -3/4 = 1/2 C. -5/6 ÷ 1/3 = -5/2
3. States and uses the properties of multiplication and division for rational numbers. Compares these properties with the properties for multiplication and division in the set of whole numbers, the set of natural numbers and the set of integers.	Write the letter of the correct statement. C The closure property for multiplication is shown by the example. A. 1/6 x -1/5 = -1/5 x 1/6 B. 1 x -7/8 = -7/8 C. -2/3 x 2/3 =-4/9

Textual Resources	Related Resources	Notes
Addition and Subtraction		
2. HM Book II, pp. 51-55		
3. HM Book II, pp. 282-288, 296, 297		
Multiplication and Division		
1. HM Book II, pp. 166-168		
2. HM Book II, pp. 63-68, 73-80		
3. HM Book II, pp. 68-72		

LEVEL I RATIONAL NUMBERS	Example Rational Numbers
1. Orders two, three or four rational numbers including positive and negative numbers of mixed form, decimals, whole numbers, etc.	Order the following. -8, +3/2, -13.75 -13.75, -8, +3/2
2. Demonstrates proficiency in the computational skills of addition, subtraction, multiplication, division and exponentiation in the set of rational numbers. Finds equivalent fractions or approximations including decimal representation.	Complete each statement to make it true. -9/29 + -3/37 = -3/37 + -9/29 3/4 ÷ 9/10 = 3/4 x 10/9
3. Proves that the property of density is true in the set of rational numbers.	Name a rational number between the given rational numbers. .003; .0032 .0031
4. Finds a terminating or a repeating decimal for a fractional number or vice versa.	Find a fraction which names the repeating decimal. $.1\overline{6}$ = 1/6 Change this fraction to a decimal. $\frac{1}{3}$ = $.3\overline{3}$
5. Solves verbal problems with emphasis on the computational skill related to the set of rational numbers.	An aquanaut requires 1.8 lbs. of oxygen every twelve hours. How many hours could three aquanauts stay down if their total supply was 27 lbs? 5 (12) hr. periods or 60 hours
6. Finds the absolute value of any rational number.	Give the absolute value of the following: A. -6 +6 B. -12.65 +12.65 C. + 3 -3 D. .002 -.002

Textual Resources	Related Resources	Notes
Rational Numbers		
1. HM Book II, pp. 10, 17-19		
2. HM Book II, pp. 31-78		
3. HM Book II, pp. 242, 243 249		
4. HM Book II, pp. 224-233		
5. HM Book II, pp. 36, 37, 40, 54, 55, 64, 65		
6. HM Book II, pp. 21-24		

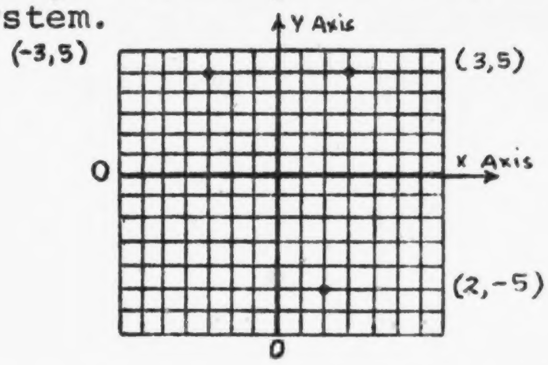


LEVEL I GEOMETRY	Example Geometry
1. Makes rational approximations in finding square roots. Uses decimal numerals.	Approximate the square root of 7 to the tenths place. 2.6
2. Uses trigonometric ratios in measuring triangles to determine similarity, sin, cosine and tangent.	 What is sin A? 3/7 What is cos A? 5/7 What is tan A? 3/5
3. Draws figures to a given scale in order to obtain approximate solutions to problems involving lengths and angles.	A plot of land measures 60' by 150'. A scale of 1" to 30' is used. What would the measurements be of the scale drawing? 2" x 5"
4. Classifies and sketches pyramids and prisms according to their bases.	Sketch a square pyramid. 
5. Identifies and states the three properties of congruent triangles.	Fill in the blanks to make a true statement. Two triangles are congruent if the 2 angles and the included side of one triangle are congruent to those of another triangle.

Textual Resources	Related Resources	Notes
Geometry		
1. HM Book II, pp. 336-347		
2. HM Book II, pp. 353-358		
3. HM Book II, pp. 359-364		
4. HM Book II, pp. 381-403		
5. HM Book II, pp. 118-131		

LEVEL I	Example
Geometry	Geometry
6. Converts the metric system of measurement in length, area, volume, mass and capacity to the English system and vice versa.	Convert the following measures: 3 ft. = 91.44 cm. 2 cu. in. = 32.78 cc.
7. Uses the concepts of "precision and accuracy" in problem situations.	Which would give the most accurate measure; a one inch measure or a one centimeter measure? 1 cm. What might be the greatest possible error? 1/2 cm.
8. Uses variety of tools to construct various geometric figures in a plane. Teacher note: Instructions, page 21 teacher edition.	Match the tool needed to perform the following operations. Some tools may be used more than once. A. Compass B. Ruler C. Protractor D. Straightedge Draw chords B-D Draw circles A Draw perpendicular line A-D Measure angles C Measure chords B

Textual Resources	Related Resources	Notes
Geometry		
6. HM Book II, pp. 174-196		
7. HM Book II, pp. 202-216		
8. HM Book II, pp. 84-99, 124-127, 130, 131, 389		

LEVEL I SPECIAL TOPICS	Example Special Topics
1. Works with ordered pairs in solving equations.	State whether one of the following ordered pairs is a solution to $3x + y = 10$. (3,1), (6,1), (9,1)
2. Plots and labels ordered pairs as points on a cartesian coordinate plane and vice versa.	Graph (3,5),, (-3,5), (2,-5) using a rectangular coordinate system. 
3. Applies mathematical skills to real life situations. Uses ratio and/or proportion whenever possible.	The width of a desk is half the length. If the perimeter is 48", what is the width of the desk? 8 in.
4. States the difference between equal and emperical probabilities, and solves problems related to both.	How could you determine the emperical probability of it raining on July 4, 1971, in Brevard County? Looking up past weather reports for July 4
5. Solves verbal problems using skills learned from the different topics. Teacher note: Refer to six-step method pp. 316-318.	Keith is 4 years older than Jim. In 6 years, the sum of their ages will be 32. How old is each boy now? Keith 12years Jim 8 years

Textual Resources	Related Resources	Notes
Special Topics		
1. HM Book II, pp. 431-437		
2. HM Book II, pp. 438-459		
3. HM Book II, pp. 312-327		
4. HM Book II, pp. 470-487		
5. HM Book II, pp. 315-321		